

**KERAJAAN MALAYSIA**

**MAJLIS SUKAN NEGARA**

**DOKUMEN SEBUT HARGA**

**KERJA-KERJA PEMBAIKAN JALAN DAN LONGKANG  
SEDIADA SERTA YANG BERKAITAN DENGANNYA DI  
MAJLIS SUKAN NEGARA, BUKIT JALIL, KUALA LUMPUR  
UNTUK MAJLIS SUKAN NEGARA MALAYSIA**

**NO. SEBUT HARGA : .....**



**KETUA PENGARAH  
MAJLIS SUKAN NEGARA MALAYSIA  
KOMPLEKS SUKAN NEGARA  
BUKIT JALIL, SRI PETALING  
57000 KUALA LUMPUR**



No. Tawaran Sebutharga : .....  
Nama Tawaran Sebutharga : .....  
Tarikh Tutup : .....  
Cadangan Tempoh Siap/Penyerahan : - : .....

BAHAWASANYA, saya mengaku bahawa butir-butir dan keterangan yang diberikan di bawah ini mengenai perniagaan/syarikat saya adalah betul dan benar, maka Kerajaan boleh mengambil apa-apa tindakan terhadap saya di bawah apa-apa undang-undang yang berkuatkuasa

1. **Maklumat Penyebutharga**

a) Nama Penyebutharga : .....  
b) Nama Syarikat : .....  
c) Alamat Syarikat / Penyebutharga : .....  
d) Email (Wajib diisi) : .....  
e) No. H/P : .....

2. **No. Pendaftaran Syarikat dengan Suruhanjaya Syarikat Malaysia (SSM) dan Kementerian Kewangan Malaysia (MOF)**

(Sila lampirkan Sijil)

3. **Taraf Syarikat** : Bumiputra / Bukan Bumiputra / Sendirian Berhad /Berhad/ Perkongsian/ Milikan Tunggal

4. **Jenis Perniagaan** : .....

5. **Bilangan Pekerja** : .....

a) Pengurusan  
b) Profesional  
c) Teknikal  
d) Sokongan


6. **Maklumat Pemilik dan Pengurusan Syarikat**

a) Ahli-ahli Lembaga Pengarah

Nama	Jawatan	Peratus Pegangan Saham (%)

b) Ahli-ahli Pengurusan dan Profesional

Kategori Jawatan	Bilangan Pekerja
JUMLAH	

7. Kedudukan Modal

(a) Modal Dibenarkan :

(b) Modal Dibayar :

**(sila lampirkan satu (1) salinan BAKI penyata akaun bank syarikat yang terkini)**

(c) Kedudukan Saham Dalam Peratus

- (i) Bumiputra : ..... %
- (ii) Bukan Bumiputra : ..... %
- (iii) Modal Asing (Foreign Investment) : ..... %
- (iv) Dalam Negeri : ..... %

8. Pengalaman Dalam Bekalan/Perkhidmatan/Kerja Yang Berkaitan

Sila Senaraikan jenis bekalan/perkhidmatan/kerja dalam tempoh **tiga (3) tahun** terkini. (Jika ruang tidak mencukupi, sila sertakan lampiran).

Jenis Bekalan/ Perkhidmatan/Kerja	Nama Kerajaan/ Swasta	Nilai	Tempat	Tempoh/One Off

Saya akui bahawa butir-butir di atas adalah betul dan benar:

Tandatangan .....  
 Nama Penyebutharga .....  
 Jawatan .....  
 Tarikh .....

Borang Tawaran Harga dan Borang Maklumat Penyebutharga perlu cop syarikat dan ditandatangani oleh pihak syarikat.

**Borang ini WAJIB diisi dengan LENGKAP dan sebarang kegagalan pengisian maklumat boleh menyebabkan tawaran sebutharga terbatal**

**NOTA: Dokumen yang telah lengkap hendaklah di klip atau tebuk lubang 2 sahaja (JANGAN GUNA BINDING/PELEKAT)**



## MAJLIS SUKAN NEGARA MALAYSIA

*Ke Arah Kecemerlangan Sukan*

### SURAT AKUAN PEMBIDA

Saya, ..... No. Kad Pengenalan ..... yang mewakili (Nama Syarikat: ..... nombor Pendaftaran ..... dengan ini mengisytiharkan bahawa saya atau mana-mana individu yang mewakili syarikat ini tidak akan menawar atau memberi **rasuah** kepada mana-mana individu dalam ..... atau mana-mana individu lain, sebagai sogokan untuk dipilih dalam tender/sebutharga\* seperti di atas. Bersama ini dilampirkan Surat Perwakilan Kuasa bagi saya mewakili syarikat seperti tercatat untuk membuat pengisytiharan ini.

2. Sekiranya saya, atau mana-mana individu yang mewakili syarikat ini didapati cuba menawar atau memberi **rasuah** kepada mana-mana individu dalam ..... atau mana-mana individu lain sebagai sogokan untuk dipilih dalam tender/sebutharga\* seperti di atas, maka saya sebagai wakil syarikat bersetuju tindakan-tindakan berikut diambil:

Penarikan balik tawaran kontrak bagi tender/sebutharga\* di atas; atau  
Penamatan kontrak bagi tender/sebutharga\* di atas; dan  
Lain-lain tindakan tatatertib mengikut peraturan perolehan kerajaan yang berkuatkuasa.

3. Sekiranya terdapat mana-mana individu cuba meminta **rasuah** daripada saya atau mana-mana individu yang berkaitan dengan syarikat ini sebagai sogokan untuk dipilih dalam tender/sebutharga\* seperti di atas, maka saya berjanji akan dengan segera melaporkan perbuatan tersebut kepada Suruhanjaya Pencegahan Rasuah Malaysia (SPRM) atau balai polis yang berhampiran.

Yang Benar

.....  
Nama :  
No. K/p:  
Cop syarikat:

Catatan: i) \*Potong mana yang tidak berkenaan.  
ii) Surat akuan ini hendaklah dikemukakan bersama Surat Perwakilan Kuasa

**KERJA-KERJA PEMBAIKAN JALAN DAN LONGKANG SEDIADA SERTA YANG BERKAITAN  
DENGANNYA DI MAJLIS SUKAN NEGARA, BUKIT JALIL, KUALA LUMPUR  
UNTUK MAJLIS SUKAN NEGARA MALAYSIA**

**ISI KANDUNGAN**

<b><u>NO</u></b>	<b><u>PERKARA</u></b>	<b><u>MUKA SURAT</u></b>
1	SENARAI SEMAKAN	SM/1-2
2	ARAHAN KEPADA PENYEBUTHARGA	Page 1 – Page 7
3	SURAT AKUAN PEMBIDA (SAP bertarikh 1 April 2010) <b>LAMPIRAN A1</b>	SAP/1
4	SYARAT-SYARAT SEBUT HARGA	Page 8 – Page 14
5	BORANG SEBUT HARGA	BSH/1
6	SENARAI KUANTITI	
7	SPEKIFIKASI	A/1 – B/17
8	REKOD PENGALAMAN KERJA DALAM 5 TAHUN LEPAS – BORANG D	BRG-D/1
9	SENARAI KAKITANGAN TEKNIKAL – BORANG E	BRG-E/1
10	KEEMPUNYAAN LOJI DAN PERALATAN UTAMA – BORANG F	BRG-F/1
11	PRESTASI KERJA SEMASA a) BORANG G b) BORANG GA c) BORANG GA1	BRG-G/1 BRG-GA/1 BRG-GA1/1
12	SENARAI SUB-KONTRAKTOR PAKAR – BORANG H	BRG-E/1-2
13	LUKISAN TAPAK BINA	

# **SENARAI SEMAKAN**

### SENARAI SEMAK

Sila Tandakan  bagi Dokumen-dokumen yang disertakan.

Bil	Perkara/ Dokumen	Untuk di tanda oleh Syarikat	Untuk di tanda oleh Jawatankuasa Pembuka Sebut Harga
1	Salinan Sijil Perolehan Kerja Kerajaan (SPKK)		
2	Salinan Perakuan Pendaftaran Kontraktor (PPK)		
3	Salinan Sijil Taraf Bumiputera (STB) - PKK		
4	Salinan Penyata Akaun Bank (3 Bulan) Terkini Yang Disahkan Oleh Pihak Bank		
5	Salinan Sijil Pematuhan Cukai (TCC)		
6	Borang Sebut Harga telah diisi dengan lengkap (termasuk nilai tawaran dan tempoh siap) dan ditandatangani oleh Penama seperti tertera dalam Sijil Pendaftaran dari CIDB/PKK (BSH/1)		
7	Ringkasan Sebut Harga telah diisi dengan lengkap (RSH/1)		
8	Senarai Kerja 5 tahun yang telah disiapkan (BRG-D/1)		
9	Senarai Kakitangan Teknikal (BRG-E/1)		
10	Senarai Keempunyaan Loji dan Peralatan Utama (BRG-F/1)		
11	Prestasi Kerja Semasa (BRG-G/GA/GA1)		
12	Senarai Sub-Kontraktor Pakar (BRG-H/1-2)		
13	Profil Syarikat (Lengkap dan Sempurna)		
14	Surat Akuan Pembida (Lampiran A1)		
15	Addenda Sebutharga (jika berkaitan)		
16	Lain-lain sekiranya ada: .....		

**PENGESAHAN OLEH SYARIKAT**

Dengan ini saya mengesahkan bahawa saya telah membaca dan memahami semua syarat-syarat dan terma yang dinyatakan di dalam dokumen sebut harga. Semua maklumat yang dikemukakan adalah benar.

Tandatangan:

Nama:

Jawatan:

Tarikh:

**UNTUK KEGUNAAN MAJLIS SUKAN NEGARA**

Jawatankuasa Pembuka Sebut Harga mengesahkan penerimaan dokumen bertanda kecuali bagi perkara bil.....(jika ada).

Tandatangan:

Nama:

Jawatan:

Tarikh:

Tandatangan:

Nama:

Jawatan:

Tarikh:

# **ARAHAN KEPADA PENYEBUTHARGA**

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## ARAHAN KEPADA PENYEBUT HARGA

### 1. HAK KERAJAAN UNTUK MENERIMA / MENOLAK SEBUT HARGA

Kerajaan adalah tidak terikat untuk menerima sebut harga yang terendah atau mana-mana sebut harga atau memberi apa-apa sebab di atas penolakan sesuatu sebut harga. Keputusan Jawatankuasa Sebut Harga adalah muktamad.

### 2. CARA-CARA MELENGKAPKAN DOKUMEN SEBUT HARGA

#### 2.1. Penyediaan Sebut Harga

Kontraktor adalah dikehendaki mengisi dengan dakwat segala maklumat berikut dengan sepenuhnya:-

- (a) Harga dan tandatangan Kontraktor di Ringkasan Sebut Harga,
- (b) Harga, tempoh dan tandatangan dalam Borang Sebut Harga,
- (c) Senarai Kerja Dalam Tangan,
- (d) Senarai Kerja Pengalaman 5 Tahun,
- (e) Senarai Kakitangan Teknikal,
- (f) Senarai Loji dan Peralatan Utama,
- (g) Jadual Kadar Harga (jika ada),
- (h) Butir-butir Spesifikasi (jika ada),
- (i) Surat Akuan Pembida.
- (j) Jika berlaku kesilapan dalam mengisi maklumat-maklumat di atas Penyebut Harga hendaklah menandatangani ringkas semua pembetulan.
- (k) Kegagalan mengisi/menandatangani Borang Sebut Harga akan mengakibatkan Sebut Harga ditolak.
- (l) Sekiranya terdapat percanggahan di antara maklumat yang dinyatakan dalam Ringkasan Sebut Harga dan Borang Sebut Harga, maklumat di dalam Borang Sebut Harga diberi keutamaan.
- (m) Sekiranya Penyebut Harga didapati memberikan maklumat palsu atau sengaja menyorok atau tidak memberikan mana-mana maklumat yang memberikan kesan negatif terhadap keupayaannya, Sebut Harganya akan ditolak dan tindakan tatatertib akan diperakukan terhadapnya.

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2.2. Dokumen-dokumen lain yang mesti dikemukakan **(Dokumen Wajib/Sokongan)**

- (a) Salinan Sijil Perolehan Kerja Kerajaan (SPKK)
- (b) Salinan Sijil Perakuan Pendaftaran Kontraktor (PPK)
- (c) Salinan Sijil Taraf Bumiputera (PKK)
- (d) Senarai sub-kontraktor pakar (jika berkaitan)

2.3. Penyerahan Dokumen Sebut Harga

- (a) Dokumen Sebut Harga yang telah diisi dengan lengkap hendaklah dimasukkan ke dalam sampul surat berlakri yang dicatatkan dengan bilangan Sebut Harga ..... serta tajuk sebut harga dan hendaklah dimasukkan ke dalam peti sebut harga pada masa dan tempat yang ditetapkan dalam Notis Sebut Harga.
- (b) Jika Dokumen Sebut Harga tidak diserahkan dengan tangan, Penyebut Harga hendaklah menghantar Dokumen tersebut secara pos berdaftar supaya tiba pada atau sebelum masa dan di tempat yang ditetapkan seperti berikut :

**Lobi (Aras Bawah),  
Majlis Sukan Negara Malaysia,  
Kompleks Sukan Bukit Jalil,  
Seri Petaling,  
57000 Kuala Lumpur**

**sebelum jam 12.00 tengahari**

- (c) Sebut Harga yang diserahkan selepas masa yang ditetapkan, berbangkit atas sebarang sebab, tidak akan dipertimbangkan.

2.4. Penjelasan Lanjut

Sekiranya terdapat maklumat dalam Dokumen Sebut Harga yang tidak jelas atau bercanggah, Penyebut Harga boleh menghubungi pejabat yang menjual/mengeluarkan Dokumen Sebut Harga untuk penjelasan lanjut.

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2.5. Tandatangani Oleh Penyebutharga

Sebutharga hendaklah ditandatangani oleh pegawai yang ditauliahkan oleh syarikat seperti penama yang dinyatakan dalam Sijil Perolehan Kerja Kerajaan (SPKK) yang dikeluarkan oleh CIDB, Pusat Khidmat Kontraktor (PKK) atau PUKONSA/ UPKJ yang mana berkenaan.

**3. TEMPOH SIAP KERJA**

Kerja ini hendaklah disiapkan dalam tempoh tidak melebihi **12 Minggu**. Mana penyebut harga yang menawarkan tempoh siap kerja melebihi tempoh siap kerja maksimum yang ditetapkan tidak akan dipertimbangkan.

**4. BAYARAN DOKUMEN SEBUT HARGA**

\* Dokumen Sebut Harga ini adalah **PERCUMA** atau;

\* ~~Dokumen Sebut Harga ini dijual dengan harga RM..... (Ringgit Malaysia :  
..... sahaja)~~

Note

\* Potong tidak berkenaan

**5. PERBELANJAAN PENYEDIAAN SEBUT HARGA**

Semua Perbelanjaan bagi penyediaan sebut harga ini hendaklah ditanggung oleh Penyebut Harga sendiri.

**6. TEMPOH SAH SEBUT HARGA**

Sebut Harga ini sah selama sembilan puluh (90) hari dari tarikh tutup sebut harga. Penyebut harga tidak boleh menarik balik sebut harganya sebelum tamat tempoh sah sebut harga. Tindakan tatatertib akan diambil sekiranya penyebut harga menarik balik sebut harganya sebelum tamat sah sebut harga. Laporan mengenai penarikan balik Sebut Harga oleh penyebut harga akan dikemukakan kepada CIDB/BPKU untuk tindakan.

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## 7. PELAKSANAAN INTEGRITY PACT DALAM PEROLEHAN KERAJAAN

Penyebut harga wajib mengemukakan **Surat Akuan Pembida** bersama-sama dengan Dokumen Sebutharga di mana penyebut harga berwaad untuk tidak akan menawarkan atau memberi rasuah kepada mana-mana individu lain sebagai sogokan untuk dipilih dalam sebut harga tersebut. Surat Akuan Pembida ini hendaklah dilengkapkan dan ditandatangani oleh Pegawai Syarikat yang ditauliahkan.

Surat Akuan Pembida tersebut adalah menjadi salah satu dokumen mandatori dalam penilaian sebut harga peringkat pertama. Sekiranya penyebut harga gagal mengemukakan **Surat Akuan Pembida** yang telah dilengkapkan dan ditandatangani, penyebut harga tersebut akan dinilai sebagai gagal dalam penilaian peringkat pertama (gagal kriteria mandatori sebut harga) dan penilaian seterusnya tidak akan dilaksanakan.

Penyebut harga yang berjaya wajib mengemukakan **Surat Akuan Pembida Berjaya** beserta dengan Borang Perjanjian Inden Kerja/Surat Setuju Terima yang telah ditandatangani di mana ia berwaad tidak akan memberi rasuah sebagai ganjaran kerana mendapatkan kontrak. Surat Akuan ini akan menjadi sebahagian daripada Kontrak.

Pemalsuan maklumat dokumen dan rekod untuk mengaburi penilaian perolehan adalah kesalahan jenayah dan boleh disabitkan di bawah Kanun Keseksaan (Akta 574).

## 8. DASAR CUKAI JUALAN DAN CUKAI PERKHIDMATAN (CJCP)

Kerajaan memutuskan untuk melaksanakan Cukai Jualan dan Cukai Perkhidmatan (CJCP) bagi menggantikan Cukai Barang dan Perkhidmatan (GST) mulai 1 September 2018 berdasarkan Akta Cukai Jualan 2018 [Akta 806] dan Akta Cukai Perkhidmatan 2018 [Akta 807].

Akta Cukai Jualan 2018 [Akta 806] dan Akta Cukai Perkhidmatan 2018 [Akta 807] telah berkuat kuasa mulai 1 September 2018. Selaras dengan peruntukan dalam Akta tersebut, perolehan kerja pembinaan tidak dikenakan Cukai Perkhidmatan. Bagi perolehan kerja lain antaranya pengurusan fasiliti dan lain-lain, Agensi Kerajaan hendaklah merujuk kepada Jadual Pertama di bawah Peraturan Cukai Perkhidmatan 2018 dan peraturan semasa yang berkuat kuasa.

Agensi Kerajaan hendaklah menggunakan anggaran jabatan tanpa kenaan CJCP untuk menentukan kaedah perolehan.

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Bagi pengeluaran Surat Setuju Terima (SST), Agensi hendaklah merujuk kepada 1PP/PK4.2 atau pekeliling berkaitan SST yang berkuat kuasa.

Bagi memastikan urusan perolehan dan pembayaran dapat dilaksanakan dengan lancar selaras dengan perkembangan dan peraturan terkini, satu panduan perlu disediakan.

## **9. PERINGATAN MENGENAI KESALAHAN RASUAH**

Semua Penyebut Harga adalah diingatkan supaya tidak terlibat dalam aktiviti jenayah rasuah berkaitan dengan perolehan ini. Sehubungan dengan itu, para Penyebut Harga diberi peringatan berikut:

- 9.1 Sebarang perbuatan atau percubaan rasuah untuk menawar atau memberi, meminta atau menerima apa-apa suapan secara rasuah kepada dan daripada mana-mana orang berkaitan perolehan ini merupakan satu kesalahan jenayah di bawah Akta Suruhanjaya Pencegahan Rasuah Malaysia 2009 (Akta 694).
- 9.2 Sekiranya mana-mana pihak ada menawar atau memberi apa-apa suapan kepada mana-mana anggota perkhidmatan awam, maka pihak yang ditawarkan atau diberi suapan dikehendaki membuat aduan dengan segera ke pejabat Suruhanjaya Pencegahan Rasuah atau balai polis yang berhampiran. Kegagalan berbuat demikian adalah merupakan suatu kesalahan di bawah Akta Suruhanjaya Pencegahan Rasuah Malaysia 2009 (Akta 694).
- 9.3 Tanpa prejudis kepada tindakan-tindakan lain, tindakan tatatertib terhadap anggota perkhidmatan awam dan menyenaraihitamkan Kontraktor boleh diambil sekiranya pihak-pihak terlibat dengan kesalahan rasuah di bawah Akta Suruhanjaya Pencegahan Rasuah Malaysia 2009 (Akta 694).
- 9.4 Mana-mana Kontraktor yang membuat tuntutan bayaran berkaitan perolehan ini walaupun tiada kerja dibuat mengikut spesifikasi yang ditetapkan dan mana-mana anggota perkhidmatan awam yang mengesahkan tuntutan berkenaan adalah melakukan kesalahan di bawah Akta Suruhanjaya Pencegahan Rasuah Malaysia 2009 (Akta 694).

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**10. PEMATUHAN AKTA 342 DAN NORMA BAHARU DALAM SEKTOR PEMBINAAN DAN DALAM MENANGANI EPIDEMIK DAN PANDEMIK COVID 19**

- 10.1 Penyebutharga yang berjaya dikehendaki mematuhi Akta Pencegahan dan Pengawalan Penyakit Berjangkit 1988 (Akta 342) dan semua Garis Panduan dan Prosedur Operasi Piawai yang berkaitan dalam menangani Epidemik dan Pandemi seperti wabak Covid 19 yang dikeluarkan oleh Kementerian Kesihatan Malaysia, CIDB dan Jabatan Kerja Raya Malaysia.
- 10.2 Penyebutharga dikehendaki mengambilkira dalam harga tawaran untuk pematuhan perkara 60.1.
- 10.3 Kegagalan mematuhi Akta, Garis Panduan dan Prosedur Operasi Piawai yang telah ditetapkan menyebabkan tindakan boleh di ambil oleh agensi agensi yang berkenaan dan sebarang tuntutan akibat tindakan ini tidak akan dipertimbangkan

**11. ADDENDA SEBUTHARGA**

- 11.1 Sebelum tarikh akhir bagi penyerahan sebutharga, Jabatan/Agensi boleh mengeluarkan Addenda Sebutharga untuk menerangkan, membetulkan, mengurangkan atau membuat tambahan mana-mana bahagian Kandungan dokumen sebutharga. Semua Addenda Sebutharga akan dikeluarkan secara rasmi kepada semua penyebutharga melalui Jabatan/Agensi yang memanggil sebutharga.
- 11.2 Setiap Addenda Sebutharga yang dikeluarkan akan diedarkan kepada semua penyebutharga dan akan menjadi sebahagian daripada dokumen sebutharga. Penerimaan setiap Addenda Sebutharga hendaklah diakui melalui Borang Bukti Penerimaan yang disertakan bersama-sama Addenda Sebutharga. Borang Bukti Penerimaan bagi Addenda Sebutharga yang terlibat hendaklah dikembalikan bersama-sama dengan dokumen sebutharga bagi tujuan penilaian dan tindakan selanjutnya. Ianya menjadi sebahagian daripada syarat wajib dalam proses penilaian sebutharga yang dilakukan. Kegagalan berbuat demikian boleh menyebabkan sebutharga berkenaan ditolak.
- 11.3 Penyebutharga hendaklah juga mengesahkan penerimaan semua Addenda Sebutharga yang dikeluarkan dalam Senarai Semakan Mengemukakan Sebutharga. Kegagalan berbuat demikian boleh menyebabkan sebutharga berkenaan ditolak. Semua Addenda Sebutharga yang dikeluarkan adalah menjadi sebahagian dari Kontrak.
- 11.4 Penyebutharga hendaklah mengambil tindakan sewajarnya terhadap apa-apa maklumat atau arahan yang dinyatakan dalam Addenda Sebutharga.

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## 12. HARGA INDIKATIF JABATAN

- 12.1 Harga Indikatif Jabatan bagi sebutharga ini adalah Ringgit Malaysia :  
**(EMPAT RATUS SEMBILAN PULUH RIBU SAHAJA (RM490,000.00))**
- 12.2 Harga Indikatif Jabatan ini merupakan suatu anggaran sahaja dan amaun tersebut tidak mengikat Kerajaan atau mana-mana pihak lain juga bagi maksud mengelakkan kekeliruan yang mungkin berbangkit.
- 12.3 Pihak Kerajaan tidak menjamin bahawa syarikat akan dipilih atau boleh menyiapkan kerja dengan bersandarkan Harga Indikatif Jabatan.

# **SURAT AKUAN PEMBIDA**

**SURAT AKUAN PEMBIDA**

Bagi

**KERJA-KERJA PEMBAIKAN JALAN DAN LONGKANG SEDIADA SERTA YANG BERKAITAN DENGANNYA DI MAJLIS SUKAN NEGARA, BUKIT JALIL, KUALA LUMPUR UNTUK MAJLIS SUKAN NEGARA MALAYSIA**

**NO SEBUTHARGA :.....**

Saya, ..... nombor K.P.....yang mewakili .....nombor Pendaftaran.....atau mana-mana individu yang mewakili syarikat ini tidak akan menawar atau memberi rasuah kepada mana-mana individu dalam **MAJLIS SUKAN NEGARA** atau mana-mana individu lain, sebagai sokongan untuk dipilih dalam Sebut Harga seperti di atas. Bersama-sama ini dilampirkan Surat Perwakilan Kuasa bagi saya mewakili syarikat seperti tercatat di atas untuk membuat pengisytiharan ini.

2. Sekiranya saya atau mana-mana individu yang mewakili syarikat ini didapati bersalah menawar atau memberi rasuah kepada mana-mana individu dalam **MAJLIS SUKAN NEGARA** atau mana-mana individu lain sebagai sogokan untuk dipilih dalam Sebut Harga seperti di atas, maka saya sebagai wakil syarikat bersetuju tindakan-tindakan berikut diambil:

- 2.1 Penarikan balik tawaran kontrak bagi Sebut Harga di atas ; atau
- 2.2 Penamatan kontrak bagi Sebut Harga di atas;
- 2.3 Disabitkan dibawah Kanun Keseksaan (Akta 574); dan
- 2.4 Tindakan tatatertib lain mengikut peraturan perolehan Kerajaan.

3. Sekiranya terdapat mana-mana individu cuba meminta rasuah daripada saya atau mana-mana individu yang berkaitan dengan syarikat ini sebagai sogokan untuk dipilih dalam Sebut Harga seperti di atas, maka saya berjanji akan dengan segera melaporkan perbuatan tersebut kepada pejabat Suruhanjaya Pencegahan Rasuah Malaysia (SPRM) atau balai polis yang berhampiran.

Yang Benar,

.....

Nama : .....

No.K.P : .....

Cop Syarikat :

# **SYARAT<sup>2</sup> SEBUT HARGA**

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## SYARAT-SYARAT SEBUT HARGA

### 1. PEMERIKSAAN TAPAK BINA

Kontraktor disifatkan telah memeriksa dan meneliti tapak bina dan sekitarnya, bentuk dan jenis tapak bina, takat dan jenis kerja, bahan dan barang yang perlu bagi menyiapkan kerja, cara-cara perhubungan dan laluan masuk ke tapak bina dan hendaklah mendapatkan sendiri segala maklumat yang perlu tentang risiko, luar jangkaan dan segala hal-keadaan yang mempengaruhi dan menjejaskan sebut harganya. Sebarang tuntutan yang timbul akibat daripada kegagalan Kontraktor mematuhi kehendak ini tidak akan dipertimbangkan.

### 2. INSURANS

- 2.1. Kontraktor hendaklah atas nama bersama Kerajaan dan Kontraktor mengambil Insurans Liabiliti Awam dan Insurans Kerja (sekiranya dinyatakan di dalam Butir-butir Ringkasan Sebut Harga) bagi tempoh pelaksanaan Kerja termasuk tempoh kecacatan dan ditambah tiga (3) bulan dan empat belas (14) hari. Kontraktor hendaklah juga mengemukakan Nombor Kod Pendaftaran dengan PERKESO.
- 2.2. Kontraktor hendaklah mengemukakan kepada Pegawai Inden semua polisi insurans dan Nombor Kod Pendaftaran dengan PERKESO yang tersebut di atas sebelum memulakan Kerja. Bagaimanapun untuk tujuan memulakan Kerja sahaja Nota-nota Perlindungan dan resit-resit bayaran premium adalah mencukupi. Sekiranya Kontraktor gagal mengemukakan semua polisi insurans selepas tempoh sah nota-nota perlindungan, tanpa sebarang sebab yang munasabah, Pegawai Inden berhak mengambil tindakan.

### 3. BON PELAKSANAAN

Bon Pelaksanaan dikecualikan bagi perolehan yang bernilai sehingga **RM200,000.00.**

### 4. PERATURAN PERLAKSANAAN KERJA

- 4.1. Kerja-kerja yang dilaksanakan hendaklah mematuhi Spesifikasi, pelan-pelan, butir-butir kerja dalam Ringkasan Sebut Harga dan Syarat-syarat yang dinyatakan dalam Dokumen Sebut Harga ini dan Pegawai Inden atau Wakilnya.

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4.2. Kerja-kerja elektrik yang dilaksanakan di samping mematuhi kehendak di perenggan 4.1 di atas, hendaklah juga mematuhi semua peraturan dan pekeliling, undang-undang dan undang-undang kecil yang diluluskan oleh:

- 4.2.1. Suruhanjaya Tenaga
- 4.2.2. Jabatan Keselamatan Pekerjaan dan Kesihatan (JKKP)
- 4.2.3. Pemegang Lesen dan Pihak Berkuasa Bekalan Elektrik
- 4.2.4. Jabatan Bomba dan Penyelamat
- 4.2.5. Pihak Berkuasa Tempatan
- 4.2.6. Suruhanjaya Pengurusan Air Negara (SPAN)

## **5. KEGAGALAN KONTRAKTOR MEMULAKAN KERJA**

Sekiranya Kontraktor gagal memulakan kerja selepas tujuh (7) hari dari tarikh akhir tempoh mula kerja yang dinyatakan dalam Inden, tanpa sebab-sebab yang munasabah, Inden akan dibatalkan oleh Pegawai Inden dan tindakan tatatertib akan diambil terhadap kontraktor.

## **6. SUB-SEWA DAN MENYERAH HAK KERJA**

Kontraktor tidak dibenarkan mengsub-sewakan Kerja kepada Kontraktor-kontraktor lain. Kontraktor tidak boleh menyerahkan hak apa-apa faedah di bawah Inden ini tanpa terlebih dahulu mendapatkan persetujuan bertulis daripada Pegawai Inden.

## **7. PENOLAKAN BAHAN, BARANG DAN MUTU HASIL KERJA OLEH PEGAWAI INDEN**

- 7.1. Pegawai Inden atau Wakilnya berhak menolak bahan, barang dan mutu hasil kerja dari jenis piawaian yang tidak menepati seperti diperihalkan dalam spesifikasi. Kontraktor hendaklah, apabila diminta oleh Pegawai Inden, memberi kepadanya baucar-baucar dan/ atau perakuan ujian pengilang untuk membuktikan bahawa bahan-bahan dan barang-barang itu mematuhi spesifikasi. Bahan, barang dan kerja-kerja yang ditolak hendaklah diganti dan sebarang kos tambahan yang terlibat hendaklah ditanggung oleh Kontraktor sendiri.
- 7.2. Kontraktor hendaklah dengan sepenuhnya atas perbelanjaan sendiri menyediakan sampel bahan dan barang-barang untuk ujian.
- 7.3. Tiada penggantian untuk peralatan, bahan dan cara kerja yang telah ditentukan di dalam spesifikasi atau ditawarkan dan telah diterima, dibenarkan kecuali mendapat persetujuan daripada Pegawai Inden secara bertulis.

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## 8. RINGKASAN SEBUT HARGA

- 8.1. Ringkasan Sebut Harga hendaklah menjadi sebahagian daripada Borang Sebut Harga ini dan hendaklah menjadi asas Jumlah Harga Sebut Harga.
- 8.2. Harga-harga dalam Ringkasan Sebut Harga hendaklah mengambil kira semua kos termasuk kos pengangkutan, cukai, duti, levi, bayaran dan caj-caj lain yang perlu dan berkaitan bagi penyiapan Kerja dengan sempurnanya.
- 8.3. Tiada sebarang tuntutan akan dilayan bagi pelarasan harga akibat daripada perubahan kos buruh, bahan-bahan dan semua duti dan cukai kerajaan, sama ada dalam tempoh sah sebut harga atau dalam tempoh Kerja.
- 8.4. Harga-harga dalam ringkasan Sebut Harga yang dikemukakan oleh Kontraktor hendaklah tertakluk kepada persetujuan sebelumnya itu daripada Pegawai Inden tentang kemunasabahannya. Persetujuan sebelumnya itu dan apa-apa pelarasan kemudiannya kepada harga-harga dalam Ringkasan Sebut Harga hendaklah dibuat sebelum Inden Kerajaan dikeluarkan.
- 8.5. Apa-apa pelarasan harga dalam Ringkasan Sebut Harga menurut perenggan 8.4 tersebut di atas dan apa-apa kesilapan hisab dalam Ringkasan Sebut Harga hendaklah dilaraskan dan diperbetulkan sebelum Inden Kerajaan dikeluarkan. Jumlah amaun yang dilaraskan hendaklah sama dengan amaun jumlah harga pukal dalam Borang Sebut Harga. Amaun jumlah harga pukal dalam Borang Sebut Harga hendaklah tidak berubah.
- 8.6. **Sekiranya sebut harga berasaskan senarai kuantiti sementara, pengukuran semula hendaklah dibuat dan harga sebut harga diselaraskan.**

## 9. PERCANGGAHAN DAN KECUKUPAN DOKUMEN SEBUT HARGA

- 9.1. Borang Perjanjian Inden Kerja, Surat Akuan Pembida Berjaya yang ditandatangani oleh Kontraktor dan Dokumen Sebut Harga hendaklah disifatkan menjadi dan dibaca serta ditafsirkan sebagai sebahagian daripada Kontrak ini.
- 9.2. Dokumen Sebut Harga adalah dikira sebagai saling jelas-menjelas antara satu sama lain. Kontraktor hendaklah mengadakan segala yang perlu untuk melaksanakan kerja dengan sewajarnya sehinggalah siap mengikut tujuan dan maksud sebenar. Dokumen Sebut Harga pada keseluruhannya sama ada atau tidak tujuan dan maksud itu hendaklah difahamkan dengan munasabahnyanya dari Dokumen Sebut Harga itu.

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- 9.3. Jika Kontraktor mendapati apa-apa percanggahan dalam Dokumen Sebut Harga dia hendaklah merujuk kepada Pegawai Inden untuk mendapatkan keputusan.

**10. KEGAGALAN KONTRAKTOR MENYIAPKAN KERJA DAN PENAMATAN PERLANTIKAN KONTRAKTOR**

Pegawai inden berhak membatalkan Inden sekiranya Kontraktor berada dalam keadaan berikut dan setelah menerima surat amaran daripada Pegawai Inden:

- (a) Kontraktor masih gagal menyiapkan Kerja dalam tempoh masa yang telah ditetapkan;
- (b) Kemajuan Kerja terlalu lembap di mana Kontraktor didapati gagal menjalankan kerja dengan tekun dan teratur tanpa apa-apa sebab yang munasabah
- (c) Penggantungan pelaksanaan seluruh atau sebahagian Kerja, tanpa apa-apa sebab yang munasabah;
- (d) Tidak mematuhi arahan Pegawai Inden tanpa apa-apa alasan yang munasabah;
- (e) Pegawai Inden berhak membatalkan Inden sekiranya Kontraktor diisytiharkan bankrap oleh pihak yang sah.

**11. ~~BAYARAN PENDAHULUAN~~**

~~Bayaran pendahuluan dibenarkan bagi kontrak yang bernilai melebihi RM 200,000.00 hingga RM 500,000.00~~

**12. BAYARAN INTERIM/ KEMAJUAN**

Pegawai Inden dibenarkan membuat bayaran interim sehingga kerja-kerja siap dilaksanakan.

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### **13. KERJA PERUBAHAN**

- 13.1. Pegawai Inden boleh menurut budi bicaranya mengeluarkan arahan-arahan yang berkehendakkan sesuatu perubahan kerja dengan secara bertulis. Tiada apa-apa perubahan yang dikeluarkan oleh Pegawai Inden atau yang disahkan kemudian oleh Pegawai Inden boleh membatalkan Sebut Harga ini.
- 13.2. Semua kerja perubahan dan/ atau tambahan yang diluluskan oleh Pegawai Inden akan diukur atau dinilai dengan menggunakan kadar harga yang ada dalam Senarai Kuantiti/ Ringkasan Sebut Harga. Jika tidak terdapat sebarang kadar harga yang bersesuaian, kadar harga yang dipersetujui oleh Pegawai Inden dan Kontraktor hendaklah digunakan.

### **14. PENGUKURAN KUANTITI SEMENTARA**

Setelah kerja-kerja yang melibatkan Kuantiti Sementara disiapkan di tapak, pengukuran semula kuantiti hendaklah dibuat secara bersama.

### **15. LANJUTAN MASA**

Pelanjutan masa adalah tertakluk kepada Jawatankuasa Sebut Harga terlebih dahulu.

### **16. TEMPOH TANGGUNGAN KECACATAN (DLP)**

- 16.1. Tempoh Tanggungan Kecacatan bagi sebut harga hendaklah sekurang-kurangnya enam (6) bulan dari tarikh kerja diperakukan siap. Bagi kerja-kerja mekanikal dan elektrik di mana tempoh waranti ke atas alat-alat dan loji-loji adalah dua belas (12) bulan dan dalam kes-kes tertentu oleh sebab jenis dan kerumitan kerja, tempoh tanggungan kecacatan yang lebih lama daripada enam bulan (6) boleh dikenakan.
- 16.2. Kontraktor dipertanggungjawabkan untuk memperbaiki kecacatan, ketidaksempurnaan, kekecutan atau apa-apa jua kerosakan lain seperti yang mungkin kelihatan dan yang disebabkan oleh bahan atau barang atau mutu hasil kerja yang tidak menepati sebut harga ini apabila diarahkan oleh Pegawai Inden dan dalam masa yang berpatutan. Kontraktor hendaklah memperbaiki kecacatan, ketidaksempurnaan, kekecutan atau apa-apa jua kerosakan lain atas Kos Kontraktor sendiri.

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- 16.3. Sekiranya Kontraktor gagal memperbaiki kecacatan, ketidaksempurnaan, kekecutan atau apa-apa jua kerosakan lain seperti yang diarahkan, Pegawai Inden berhak memotong kos memperbaiki dari baki wang yang akan dibayar kepada kontraktor atau, jika baki itu tiada mencukupi, mengeluarkan surat pengesyoran kepada Lembaga Pembangunan Industri Pembinaan Malaysia (CIDB) dan Pusat Khidmat Kontraktor (PKK) untuk menggantungkan pendaftaran Kontraktor, dan menghantar salinan-salinan tersebut kepada Pengarah Kerja Raya Negeri/ Ketua Jabatan, Bahagian Pembangunan Bumiputera, Kementerian Kerja Raya dan Lembaga Pembangunan Industri Pembinaan. Bagi Kerja-kerja elektrik/ mekanikal, salinan surat hendaklah dihantar kepada Pengarah Cawangan Kerja Elektrikal/ Pengarah Cawangan Kerja Mekanikal.
- 16.4. Tempoh tanggungan liabiliti kecacatan (DLP) sepertimana yang dinyatakan pada Surat Iringan Kepada Inden Kerajaan/Surat Setuju Terima iaitu bermula dari tarikh diambil milik dan penyerahan projek.

**17. PERATURAN MEMBAYAR SELEPAS SIAP**

Bayaran sepenuhnya hanya akan dibayar setelah kontraktor menyiapkan kerja dengan sempurna dan Perakuan Siap Kerja dikeluarkan. Walaubagaimanapun Pegawai Inden hendaklah membuat potongan atau menahan sejumlah amaun dari wang yang akan dibayar kepada Kontraktor sebagai kos untuk memperbaiki apa-apa kecacatan yang tidak dapat dibaiki oleh Kontraktor di dalam tempoh tanggungan kecacatan. Kontraktor hendaklah mengembalikan Inden Kerajaan (Pelaksanaan Kerja) dan Inden Kerajaan (Penyiapan Kerja) sepertimana yang telah ditetapkan dalam Pekeliling Perbendaharaan Malaysia (PK 4.2) kepada Pegawai Inden.

**18. PERAKUAN SIAP KERJA**

Pegawai Inden hendaklah mengeluarkan Perakuan Siap Kerja sebaik sahaja kerja disiapkan dengan sempurna dan memuaskan sejajar dengan syarat-syarat Dalam Dokumen Sebut Harga. Tempoh Tanggungan Kecacatan bermula daripada tarikh siap kerja.

**19. PERAKUAN SIAP MEMPERBAIKI KECACATAN**

Pegawai Inden hendaklah mengeluarkan Perakuan Siap Membaiki Kecacatan sebaik sahaja kontraktor telah memperbaiki kecacatan, ketidaksempurnaan, kekecutan atau apa-apa jua kerosakan lain.

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**20. PEMATUHAN KEPADA UNDANG-UNDANG OLEH KONTRAKTOR**

Kontraktor hendaklah mematuhi segala kehendak Undang-undang Kecil dan Undang-undang Berkanun dalam Malaysia semasa pelaksanaan Kerja. Kontraktor tidak berhak menuntut sebarang kos dan bayaran tambahan kerana pematuhannya dengan syarat-syarat ini.

**21. PENAMATAN BERSABIT RASUAH, AKTIVITI MENYALAHAI UNDANG-UNDANG ATAU AKTIVITI HARAM**

Tanpa menjejaskan apa-apa hak Kerajaan yang lain, jika kontraktor, personel, kakitangan atau pekerjanya disabitkan bersalah oleh mahkamah kerana rasuah atau aktiviti menyalahi undang-undang atau aktiviti haram yang berkaitan dengan Perjanjian/ Kontrak ini atau mana-mana perjanjian lain yang Kontraktor mungkin ada dengan Kerajaan, Kerajaan berhak untuk menamatkan Perjanjian / Kontrak ini pada bila-bila masa, dengan memberi notis bertulis dengan segera yang membawa maksud sedemikian kepada Kontraktor.

Setelah penamatan tersebut, Kerajaan berhak terhadap semua kerugian, kos, ganti rugi dan perbelanjaan (termasuk apa-apa kos dan perbelanjaan sampingan) yang ditanggung oleh Kerajaan yang timbul daripada penamatan tersebut.

Bagi mengelakkan keraguan, kedua-dua pihak Kerajaan dan Kontraktor bersetuju bahawa Kontraktor tidak layak terhadap sebarang bentuk kerugian termasuk kehilangan keuntungan, ganti rugi, tuntutan atau apa sekalipun setelah penamatan Kontrak ini.

**22. PERAKUAN KERJA TIDAK SIAP**

Pegawai Inden hendaklah mengeluarkan Perakuan Kerja Tidak Siap apabila penyediaan Kerja didapati telah terlambat dan sebab kelambatan tidak melayakkan Kontraktor mendapat lanjutan masa, maka kerugian atau ganti rugi yang dialami oleh Kerajaan akibat daripada kelambatan tersebut adalah ditanggung oleh Kontraktor. Kerugian atau ganti rugi yang dialami oleh Kerajaan akan diperolehi semula daripada Kontraktor melalui Ganti Rugi Tertentu dan Ditetapkan.

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**23. KENAAN DENDA/TOLAKAN/ LIQUIDATED AND ASCERTAINED DAMAGE (LAD) BAGI SEBUT HARGA KERJA**

Kelewatan dalam menyiapkan projek boleh menyebabkan peningkatan kos projek. Jika syarikat gagal memenuhi obligasi kontrak, denda/ganti rugi hendaklah dituntut daripada syarikat. Jika syarikat gagal membayarnya, denda/ganti rugi hendaklah dituntut daripada bayaran kemajuan atau daripada sebarang baki bayaran yang syarikat berhak menerima.

**\* Pengenalan LAD boleh ditetapkan berdasarkan formula seperti berikut :**

$$\text{LAD} = \frac{\text{Base Landing Rate (BLR)}}{100} \times \frac{\text{Harga Kontrak}}{365 \text{ (hari)}}$$

\* 'Prime Rate' yang dikeluarkan oleh mana-mana bank perdagangan

# **BORANG SEBUT HARGA**

**BORANG SEBUTHARGA**

Sebutharga Bil : .....

**BAHAGIAN KEWANGAN**  
.....  
**MAJLIS SUKAN NEGARA**  
.....  
**KOMPLEKS SUKAN BUKIT JALIL**  
.....  
**SERI PETALING**  
.....  
**57000 KUALA LUMPUR**  
.....  
**MALAYSIA**  
.....

Tuan,

Sebut Harga untuk :-

**KERJA-KERJA PEMBAIKAN JALAN DAN LONGKANG SEDIADA SERTA YANG BERKAITAN DENGANNYA DI MAJLIS SUKAN NEGARA, BUKIT JALIL, KUALA LUMPUR UNTUK MAJLIS SUKAN NEGARA MALAYSIA**

Di bawah dan tertakluk kepada Arahan Kepada Penyebut Harga, Syarat-syarat Sebutharga untuk kerja, Spesifikasi Kerja dan Lukisan, saya yang bertandatangan di bawah ini adalah dengan ini menawarkan untuk melaksanakan dan menyiapkan kerja-kerja tersebut bagi jumlah harga pukat sebanyak Ringgit Malaysia:  
.....  
.....(RM .....)

2. Saya bersetuju menyiapkan kerja-kerja ini dalam masa .....  
**minggu** dari tarikh mula kerja seperti yang ditetapkan di bawah Perenggan 2 Borang Perjanjian Inden Kerajaan.

Bertarikh pada ..... haribulan ..... 20.....

.....  
( Tandatangan Kontraktor)  
  
Nama Penuh : .....  
No. K/P : .....  
Alamat : .....  
.....  
.....  
Atas sifat : .....

.....  
( Tandatangan Saksi )  
  
Nama Penuh : .....  
No. K/P : .....  
Alamat : .....  
.....  
.....

.....  
Meteri atau Cap Kontraktor

# SENARAI KUANTITI

**KERJA-KERJA PEMBAIKAN JALAN DAN LONGKANG SEDIADA SERTA YANG BERKAITAN DENGANNYA  
DI MAJLIS SUKAN NEGARA, BUKIT JALIL, KUALA LUMPUR UNTUK MAJLIS SUKAN NEGARA MALAYSIA**

BIL	BUTIRAN KERJA	UNIT	KUANTITI	KADAR HARGA (RM) / KUANTITI	JUMLAH (RM)
<b>1.</b>	<b><u>KERJA-KERJA AWALAN</u></b>				
1.1	Kerja-kerja permulaan (Preliminaries) mengikut spesifikasi am, spesifikasi tambahan termasuk Insurans Tanggungan Awam, Insurans Kerja, Insurans Pampasan Kerja dengan membayar premium atau nombor pendaftaran PERKESO bagi semua pekerja.	Pukal	Pukal		
1.2	Menyediakan pekerja, peralatan keselamatan dan kebersihan semasa kerja-kerja sedang dijalankan seperti tali-tali halangan, kon, tanda amaran dan tali merah-putih sehingga kerja-kerja disiapkan mengikut arahan Pegawai Penguasa.	Pukal	Pukal		
1.3	Menyediakan laporan foto kemajuan kerja (sebelum, semasa dan selepas) sebanyak dua (2) set berwarna pada setiap tuntutan bayaran (Hard copy & soft copy – dalam thumb drive).	Pukal	Pukal		
1.4	Mengadakan dan menyediakan tong sampah mudah alih menggunakan lori mengikut kesesuaian tapak bagi menampung kapasiti sampah agar kebersihan tapak adalah sentiasa terjamin . Sampah sarap ini perlu dibawa keluar daripada tapak bina yang diluluskan oleh pihak berkuasa tempatan apabila penuh atau di atas arahan Pegawai Penguasa.	Pukal	Pukal		
1.5	Pihak kontraktor mestilah memindahkan segala peralatan sedia ada ke kawasan yang sesuai dan memindahkan semula termasuk kemas ke tempat yang diarahkan oleh pihak MSNM	Pukal	Pukal		
<b>JUMLAH</b>					

BIL	BUTIRAN KERJA	UNIT	KUANTITI	KADAR HARGA (RM) / KUANTITI	JUMLAH (RM)
2.	<b><u>LALUAN BERSEBELAHAN PADANG MSN</u></b>				
2.1	<b>Kerja-Kerja Membekal Dan Memasang Batu Kerb</b>				
2.1.1	Kerja-kerja menyediakan permukaan bagi pemasangan batu kerb, membekal dan memasang batu kerb jalan jenis ( <i>Ready mix</i> ) bersaiz 1'x 2½' lengkap kekemasan.	m	115		
2.2	<b>Membekal Dan Penanaman Rumput</b>				
2.2.1	Kerja-kerja membekal dan meratakan pasir dan tanah untuk penyediaan tapak bagi menanam rumput.	m <sup>2</sup>	575		
2.2.2	Kerja-kerja membekal dan menanam rumput jenis ( <i>Cow grass</i> ) pada jarak rapat lengkap kekemasan serta yang berkaitan dengannya. (pihak kontraktor wajib memastikan rumput yang ditanam dalam keadaan baik dan dijaga selama 2 bulan termasuk penyiraman, rumput yang mati perlu diganti perlu diganti tanpa melibatkan kos tambahan).	m <sup>2</sup>	575		
2.3	<b>Kerja-Kerja Membaikpulih Longkang Sediada</b>				
2.3.1	Kerja-kerja memecahkan permukaan longkang sediada dan membaikpulih dinding serta yang berkaitan dengannya.	m	145		
2.3.2	Kerja-kerja membekal dan memasang baru longkang separuh bulat jenis ' <i>Ready mix pc concrete drain</i> ' 1'x2 ½' dan dilepa dengan simen dan pasir lengkap kekemasan.	m	145		
2.4	<b>Laluan Ke Setor Pusat (Membina Longkang Termasuk Penutup)</b>				
2.4.1	Kerja-kerja pembersihan / sedia tapak bagi memulakan kerja-kerja pembinaan laluan longkang	Pukal	Pukal		
2.4.2	memotong jalan bagi penyediaan dan membaiki semula bahagian-bahagian yang terlibat serta membina cuping kiri dan kanan laluan	m <sup>2</sup>	6		
2.4.3	Kerja-kerja menggali tanah untuk kedalaman tidak melebihi 1500m untuk membuat longkang.	m <sup>2</sup>	6		
2.4.4	Kerja-kerja membekal dan memasang baru longkang separuh bulat jenis ' <i>Ready mix pc concrete drain</i> ' berukuran 1'x2 ½' dan dilepa dengan simen dan pasir lengkap kekemasan.	m <sup>2</sup>	6		

2.4.5	Kerja-kerja membekal dan memasang penutup longkang berukuran 1' x 2' bagi setiap keping termasuk lengkap pendakap dan kemasan serta yang berkaitan dengannya.	m <sup>2</sup>	6		
2.4.6	Kerja-kerja membekal dan menimbus tanah sebelah kiri dan kanan longkang sepanjang laluan.	Pukal	Pukal		
2.4.7	Kerja-kerja membuang dan meratakan bendasing dari konkrit serta kerja-kerja yang berkaitan dengannya	Pukal	Pukal		
<b>JUMLAH</b>					

BIL	BUTIRAN KERJA	UNIT	KUANTITI	KADAR HARGA (RM) / KUANTITI	JUMLAH (RM)
<b>3.</b>	<b><u>HADAPAN SURAU AL FAIZIN</u></b>				
<b>3.1</b>	<b><u>Ruang Meletak Kenderaan</u></b>				
3.1.1	Kerja-kerja memotong, mengorek, memecah, mengeluarkan dan membersihkan segala lapisan tar ( <i>Premix</i> ) dan <i>'Miling'</i> sedia ada berketebalan tidak kurang 75mm termasuk kerja-kerja berkaitan.	m <sup>2</sup>	2,620		
3.1.2	Kerja-kerja membekal dan menyediakan lapisan permukaan <i>'Cationic bituminous emulsion'</i> 40% pada kadar 1.5 sqm per litre <i>'Tack coat'</i> sebelum kerja-kerja menyediakan permukaan <i>'Premix'</i> .	m <sup>2</sup>	2,620		
3.1.3	Kerja-kerja membekal dan menyediakan lapisan permukaan <i>'Premixed bituminous'</i> (20mm 512 granite agg) dari pembekal yang diluluskan termasuk kos pengangkutan ke tapak bina, dibentang dan dipadatkan pada ketebalan tidak kurang 75mm dengan jentera pemadat tidak melebihi 10 tan lengkap kekemasan.	m <sup>2</sup>	2,620		
3.1.4	Kerja-kerja membekal dan menyediakan penanda jalan, arah dan kotak parking dari jenis <i>'Hot thermoplastic'</i> berwarna putih @ kuning (minima 3mm tebal pada permukaan jalan).	Pukal	Pukal		
<b>3.2</b>	<b><u>Kerb Dan Permukaan Rumput Sediada</u></b>				
3.2.1	Kerja-kerja memotong, mengorek, memecah, mengeluarkan dan membersihkan segala bendasing seperti batu kerb, tiang lampu, tanah, batu dan rumput serta yang berkaitan dengannya	m <sup>2</sup>	147		
3.2.2	Kerja-kerja membekal dan meratakan serta memadatkan pasir/tanah ( <i>Sub base</i> ) setebal tidak melebihi 150mm untuk penyediaan tapak bagi meletakkan lapisan ( <i>Crusher run</i> ) ( <i>Sub grade</i> ).	m <sup>2</sup>	147		
3.2.3	Kerja-kerja membekal dan meratakan serta memadatkan lapisan crusher run ( <i>Sub grade</i> ) setebal tidak melebihi 100mm dan meletakkan lapisan <i>'Quart dust'</i> pada permukaan <i>'Crusher run'</i> termasuk kerja-kerja pemadatan menggunakan mesin pemadat untuk penyediaan tapak bagi meletakkan lapisan premix.	m <sup>2</sup>	147		
3.2.4	Kerja-kerja membekal dan menyediakan lapisan permukaan <i>'Cationic bituminous emulsion'</i> 40% pada kadar sq.m liter tack coat sebelum kerja-kerja menyediakan permukaan <i>'Premix'</i> dijalankan.	m <sup>2</sup>	147		

3.2.5	Kerja-kerja membekal dan menyediakan lapisan permukaan ' <i>Premix bituminous macadam</i> ' (20mm size granite agg) dari pembekal yang diluluskan termasuk kos pengangkutan ketapak bina, dibentang pada ketebalan tidak kurang 50mm dengan jentera pemadat tidak melebihi 10 tan.	m <sup>2</sup>	147		
3.2.6	Kerja-kerja membekal dan menyediakan penanda jalan, arah dan kotak parking dari jenis ' <i>Hot thermoplastic</i> ' berwarna putih @ kuning (minima 3mm tebal pada permukaan jalan).	Pukal	Pukal		
<b>3.3</b>	<b>Kerja-Kerja Membaikpulih Longkang Sediada</b>				
3.3.1	Kerja-kerja memecahkan permukaan longkang sediada dan membaikpulih dinding serta yang berkaitan dengannya	m	100		
3.3.2	Kerja-kerja membekal dan memasang baru longkang separuh bulat jenis ( <i>Ready mix pc concrete drain 1'x2 ½'</i> dan dilepa dengan simen dan pasir lengkap kekemasan.	m	100		
<b>3.4</b>	<b>Laluan Masuk Dari Gate C</b>				
3.4.1	Kerja-kerja memotong, mengorek, memecah, mengeluarkan dan membersihkan segala lapisan tar ( <i>Premix</i> ) dan ' <i>Miling</i> ' sedia ada berketebalan 75mm termasuk kerja-kerja berkaitan.	m <sup>2</sup>	470		
3.4.2	Kerja-kerja membekal dan menyediakan lapisan permukaan ' <i>Cationic bituminous emulsion</i> ' 40% pada kadar 1.5 sqm per litre ' <i>Tack coat</i> ' sebelum kerja-kerja menyediakan permukaan premix.	m <sup>2</sup>	470		
3.4.3	Kerja-kerja membekal dan menyediakan lapisan permukaan ' <i>Premixed bituminous</i> '(20mm 512 granite agg) dari pembekal yang diluluskan termasuk kos pengangkutan ke tapak bina, dibentang dan dipadatkan pada ketebalan tidak kurang 75mm dengan jentera pemadat tidak melebihi 10 tan lengkap kekemasan.	m <sup>2</sup>	470		
3.4.4	Kerja-kerja membekal dan menyediakan penanda jalan, arah dan kotak parking dari jenis ' <i>hot thermoplastic</i> ' berwarna putih @ kuning (minima 3mm tebal pada permukaan jalan).	Pukal	Pukal		
				<b>JUMLAH</b>	

BIL	BUTIRAN KERJA	UNIT	KUANTITI	KADAR HARGA (RM) / KUANTITI	JUMLAH (RM)
4.	<b><u>BANGUNAN PENTADBIRAN</u></b> <b><u>RUANG MELETAK KENDERAAN (PINTU A)</u></b>				
4.1	<b>Kawasan Rumput (Island)</b>				
4.1.1	Kerja-kerja memotong, mengorek, memecah, mengeluarkan dan membersihkan segala bendasing seperti batu kerb, tiang lampu, tanah, batu dan rumput serta yang berkaitan dengannya	m <sup>2</sup>	700		
4.1.2	Kerja-kerja memotong, mencantas, menebang, mengorek akar dan membuang pokok bersaiz 2500mm ukur lilit keluar dari tapak yang dibenarkan pihak Majlis.	No	3		
4.1.3	Kerja-kerja membekal dan meratakan serta memadatkan pasir/tanah ( <i>Sub base</i> ) setebal tidak melebihi 150mm untuk penyediaan tapak bagi meletakkan lapisan ( <i>Crusher run</i> ) ( <i>Sub grade</i> ).	m <sup>2</sup>	700		
4.1.4	Kerja-kerja membekal dan meratakan serta memadatkan lapisan crusher run (sub grade) setebal tidak melebihi 100mm dan meletakkan lapisan ' <i>Quart dust</i> ' pada permukaan ' <i>Crusher run</i> ' termasuk kerja-kerja pemadatan menggunakan mesin pemadat untuk penyediaan tapak bagi meletakkan lapisan premix.	m <sup>2</sup>	700		
4.1.5	Kerja-kerja membekal dan menyediakan lapisan permukaan ' <i>Cationic bituminous emulsion</i> ' 40% pada kadar sq.m ' <i>Liter tack coat</i> ' sebelum kerja-kerja menyediakan permukaan ' <i>Premix</i> ' dijalankan.	m <sup>2</sup>	700		
4.1.6	Kerja-kerja membekal dan menyediakan lapisan permukaan ' <i>Premixed bituminous</i> '(20mm 512 granite agg) dari pembekal yang diluluskan termasuk kos pengangkutan ke tapak bina, dibentang dan dipadatkan pada ketebalan tidak kurang 75mm dengan jentera pemadat tidak melebihi 10 tan lengkap kekemasan.	m <sup>2</sup>	700		
4.1.7	Kerja-kerja membekal dan menyediakan penanda jalan, arah dan kotak parking dari jenis ' <i>Hot thermoplastic</i> ' berwarna putih @ kuning (minima 3mm tebal pada permukaan jalan).	Pukal	Pukal		

<b>4.2</b>	<b>Kerja-Kerja Membekal Dan Memasang Batu Kerb Dan 'Imprint'</b>				
4.2.1	Kerja-kerja menyediakan permukaan bagi pemasangan batu kerb, membekal dan memasang batu kerb jalan jenis ( <i>Ready mix</i> ) bersaiz 1'x 2½' lengkap kekemasan.	m	30		
4.2.2	Kerja-kerja menggali tanah bermula dari aras ' <i>Ground level</i> ' maksima kedalaman tidak melebihi 0.25 meter bagi menerima 100mm tebal ' <i>Hardcore</i> ', 30mm tebal pasir dan 75mm tebal konkrit dan 20mm kemasam ' <i>Imprint</i> '	m <sup>2</sup>	20		
4.2.3	Kerja-kerja membekal, meratakan dan memadatkan lapisan ' <i>Crusher Run</i> ' minima 100mm tebal seperti diarahkan serta lain kerja-kerja berkaitan	m <sup>2</sup>	20		
4.2.4	Menyediakan acuan konkrit ( <i>Formwork</i> ) pada bahagian sisi tidak melebihi 250mm seperti diarahkan serta lain kerja-kerja berkaitan	m <sup>2</sup>	20		
4.2.5	Kerja-kerja membekal, menghampar dan memasang kepingan jejaring No. A6 atau tetulang keluli dikimpal berbentuk jejaring 200mm x 200mm, beratnya 2.22kg setiap meter persegi seperti diarahkan serta lain kerja-kerja berkaitan	m <sup>2</sup>	20		
4.2.6	Membekal, menghampar dan memadatkan ' <i>Ready mix concrete</i> ' seperti diarahkan serta lain kerja-kerja berkaitan dengan konkrit gred 30 (1:2:4) 75mm purata tebal.	m <sup>2</sup>	20		
4.2.7	Kerja-kerja membekal, merata dan menyiapkan 20mm corak ' <i>Imprint</i> ' dan ' <i>Colour finish</i> ' termasuk ' <i>Powder coating</i> ' seperti diarahkan serta lain kerja-kerja berkaitan	m <sup>2</sup>	20		
<b>4.3</b>	<b>Kerja-Kerja Membaikpulih Longkang Sediada</b>				
4.3.1	Kerja-kerja memecahkan permukaan longkang sediada dan membaikpulih dinding serta yang berkaitan dengannya	m	30		
4.3.2	Kerja-kerja membekal dan memasang baru longkang separuh bulat jenis ( <i>Ready mix</i> ) <i>pc concrete drain</i> 1'x2 ½' dan dilepa dengan simen dan pasir lengkap kekemasan.	m	30		
<b>4.4</b>	<b>Ruang Meletak Kenderaan</b>				
4.4.1	Kerja-kerja memotong, mengorek, memecah, mengeluarkan dan membersihkan segala lapisan tar ( <i>Premix</i> ) dan ' <i>Miling</i> ' sedia ada berketebalan 75mm termasuk kerja-kerja berkaitan.	m <sup>2</sup>	1,245		
4.4.2	Kerja-kerja membekal dan menyediakan lapisan permukaan ' <i>Cationic bituminous emulsion</i> ' 40% pada kadar 1.5 sqm per litre ' <i>Tack coat</i> ' sebelum kerja-kerja menyediakan permukaan premix.	m <sup>2</sup>	1,245		

4.4.3	Kerja-kerja membekal dan menyediakan lapisan permukaan ' <i>Premixed bituminous</i> ' (20mm 512 granite agg) dari pembekal yang diluluskan termasuk kos pengangkutan ke tapak bina, dibentang dan dipadatkan pada ketebalan tidak kurang 75mm dengan jentera pemadat tidak melebihi 10 tan lengkap kekemasan.	m <sup>2</sup>	1,245		
4.4.4	Kerja-kerja membekal dan menyediakan penanda jalan, arah dan kotak parking dari jenis ' <i>Hot thermoplastic</i> ' berwarna putih @ kuning (minima 3mm tebal pada permukaan jalan).	Pukal	Pukal		
<b>4.5</b>	<b>Pintu Utama (Pintu A)</b>				
4.5.1	Kerja-kerja merekabentuk, membekal dan memasang pintu pagar utama jenis ' <i>Stainless steel</i> ' gelongsor berukuran 2.5m (H) x 7.5m (W) termasuk penyediaan tapak, kelengkapan dan lain-lain kerja yang berkaitan.	No	1		
<b>4.6</b>	<b>Longkang Bangunan Pentadbiran</b>				
4.6.1	Membekal dan memasang penutup longkang jenis ' <i>Compressed concrete slab</i> ' bersaiz 1' x 2' termasuk bingkai di sisi kiri dan kanan serta kerja-kerja berkaitan.	m	32		
<b>JUMLAH KESELURUHAN</b>					

**Notis makluman :-**

\*Kadar Kuantiti Yang Dinyatakan Dalam Sebutharga Ini **HANYALAH ANGGARAN UKURAN KUANTITI SEMENTARA**. Pihak Penyebutharga Dinasihatkan Membuat Ukuran Sendiri Di Tapak\*

# SPESIFIKASI



JABATAN KERJA RAYA MALAYSIA  
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## 1. General

- 1.1. The construction of roads and hardstanding shall generally be carried out only after completion of all drainage systems, services and ducts which may affect the Works, unless otherwise agreed by the S.O..

## 2. Flexible Pavement

### 2.1. Subgrade

- 2.1.1. Subgrade means that part of the embankment or existing ground in cutting which is immediately below the sub-base or lower sub-base of the road pavement and shoulders.
- 2.1.2. Material for the top 300mm of subgrade shall have a minimum soaked laboratory California Bearing Ratio (CBR) as shown on the Drawing when compacted to 95% of the maximum dry density determined in the *MS 1056* Compaction Test (4.5kg Rammer Method). In the event CBR value not mentioned on the Drawing, a minimum CBR value of 10% shall be adopted.
- 2.1.3. Throughout the top 300mm of subgrade, the materials shall be compacted to not less than 95% of the maximum dry density determined in the *MS 1056* Compaction Test (4.5kg Rammer Method).
- 2.1.4. In cut area, the top 300mm of the subgrade shall be scarified and recompacted to 95% of the maximum dry density determined in the *MS 1056* Compaction Test (4.5kg Rammer Method). If the S.O. is fully satisfied that the subgrade in its natural state possesses a density exceeding the requirements, then the surface of the subgrade shall be trimmed and rolled to obtain a smooth finish.
- 2.1.5. Where the material in cut area is found to be unsuitable for use in the top 300mm of subgrade or to a suitable level to be determined by the S.O., it shall be removed and replaced with suitable material which shall be compacted as indicated above. Alternatively, stabilizing agent may be used subjected to the S.O.'s approval.
- 2.1.6. The subgrade shall be finished in a neat and workmanlike manner, and the widths of embankments and cuts shall be everywhere at least of those specified or shown in the Drawings on both sides of the centre line. The top surface of the subgrade shall have the required shape, superelevation, levels and grades and shall be finished everywhere to within + 10mm and - 30mm of the required level.
- 2.1.7. Where subgrade construction encounters rock surfaces:

#### 2.1.7.1. Rock surfaces extend over the whole width of the formation:

The rock surface shall be trimmed to a free draining profile, at or below formation levels. No high spot shall protrude above the formation level. Any voids or cavities more than 0.5m below the formation level shall be filled up with approved crusher run, gravel or lean concrete having cube strength greater than C8/10N/mm<sup>2</sup>. The rock surface shall then be brought up to the formation levels with approved crushed rock or gravel, regulated and blinded.



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2.1.7.2. Rock outcrop occurs over part of the formation only:

The rock outcrop shall be cut down to a level not less than 300mm below the formation level. The surface shall then be brought up to level with suitable subgrade material.

2.2. Drainage Layer

2.2.1. This work shall consist of furnishing, placing, compacting and shaping drainage layer on a prepared and accepted subgrade in accordance with this Specification and the lines, levels, grades, dimensions and cross-sections as shown on the Drawings and/or as directed by the S.O..

2.2.2. Coarse aggregate shall be screened crushed hard rock and fine aggregate shall be screened quarry dust or sand. The aggregate shall be well graded and lie within the limits as shown in **Table P1**.

**Table P1. Gradation Limits for Drainage Layer**

B.S. Sieve Size (mm)	Percentage Passing by Weight
75.0	100
37.5	75 - 100
20.0	60 - 90
10.0	25 - 75
5.0	10 - 45
2.00	0 - 20
1.18	0 - 10

2.2.3. Notwithstanding any earlier approval of finished subgrade, the surface of the subgrade shall be, on completion of compaction and immediately before placing drainage layer, well closed and free from movement under the compaction plant and from ridges, cracks, loose material, pot holes, ruts or other defects. Any damage to or deterioration of the subgrade shall be made good in accordance with sub-section 2.1..

2.2.4. The material shall be transported, laid and compacted at a moisture content within the range + 1% to - 2% of the optimum moisture content determined in compliance with BS 5835 and without drying out or segregation.

2.2.5. The drainage layer shall be placed and compacted to the required width and thickness as shown on the Drawings, in one single layer.

2.2.6. The material shall be spread and lightly compacted with tracked spreading plant or other approved equipment with consideration given to the protection of the subgrade.

2.3. Sub-base

2.3.1. This work shall consist of furnishing, placing, compacting and shaping sub-base material on a prepared and accepted subgrade in accordance with this Specification and the lines, levels, grades, dimensions and cross-sections as shown on the Drawings and/or as directed by the S.O..

2.3.2. Sub-base shall be a natural or artificial mixture of locally available materials such as sand, gravel, crushed aggregate, et cetera, free from organic matter, clay lumps and other deleterious materials. It shall be well

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graded and conform to **Table P2** and the following quality requirements:

- 2.3.2.1. The CBR of the sub-base shall not be less than 30% or as shown on the Drawings when compacted to 95% of the maximum dry density determined in the *BS 1377* Compaction Test (4.5kg rammer method) and soaked for 4 days under a surcharge of 4.5kg. This shall involve carrying out a series of CBR tests at various dry densities, using the field moisture content. The field density must then be measured at a number of points using the sand replacement method and the CBR deduced from the mean of the field density measurements.
- 2.3.2.2. If more than 10% of the material is retained on the BS Sieve Size 20.0mm, the whole material can be assumed without test to have a CBR value of 30% or more.
- 2.3.2.3. The plasticity index when tested in accordance with *BS 1377* shall be not more than 12.
- 2.3.2.4. The 10% fines value when tested in accordance with *MS 30* shall be not less than 30kN.
- 2.3.2.5. The sand equivalent of aggregate fraction passing the No. 4 (4.75mm) sieve when tested in accordance with *ASTM D 2419* shall be not less than 45%.

**Table P2.** Gradation Limits for Sub-Base

BS Sieve Size (mm)	Percentage Passing by Weight
75.0	100
37.5	85 - 100
20.0	65 - 100
10.0	45 - 100
5.0	25 - 85
0.600	8 - 45
0.075	0 - 10

The particle size shall be determined by the washing and sieving method of *BS 1377*.

- 2.3.3. Prior to placing any sub-base material, the underlying subgrade (particularly the top 300mm of the subgrade) shall have been shaped and compacted in accordance with the provisions of sub-section 2.1. or sub-section 2.2. as appropriate. Notwithstanding any earlier approval of finished subgrade, the surface of the subgrade shall be, on completion of compaction and immediately before placing sub-base layer, well closed and free from movement under the compaction plant and from ridges, cracks, loose material, potholes, ruts or other defects. Any damage to or deterioration of the subgrade shall be made good in accordance with sub-section 2.1..
- 2.3.4. Sub-base material shall be transported, laid and compacted at a moisture content within the range + 1% to - 2% of the optimum moisture content without drying out or segregation.
- 2.3.5. Sub-base material shall be placed over the full width of the formation to the required thickness as shown on the Drawings or directed by the S.O. in one layer or more, each layer not exceeding 200mm compacted thickness. Where two or more layers are required, they shall be of



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approximately equal thickness and none shall be less than 100mm compacted thickness.

- 2.3.6. Each layer of sub-base shall be processed as necessary to bring its moisture content to a uniform level throughout the material suitable for compaction and shall then be compacted using suitable compaction equipment approved by the S.O. to not less than 95% of the maximum dry density determined in the *BS 1377* Compaction Test (4.5kg rammer method). Compaction shall be carried out in a longitudinal direction along the roadbed, and shall generally begin at the outer edge and progress uniformly towards the crown on each side in such a manner that each section receives equal compactive effort, all to the satisfaction of the S.O..
- 2.3.7. All loose, segregated or other defective areas shall be removed to the full thickness of the layer, and new sub-base material laid and compacted.
- 2.3.8. The sub-base shall be finished in a neat and workmanlike manner and shall have an average thickness over any 100m length not less than the required thickness. The top surface of the sub-base shall have the required shape, superelevation, levels and grades, and shall be everywhere within the tolerances as specified in sub-section 3.2..

**2.4. Crushed Aggregate Roadbase**

- 2.4.1. This work shall consist of furnishing, placing, compacting and shaping crushed aggregate roadbase material on a prepared and accepted subgrade or sub-base in accordance with this Specification and the lines, levels, grades, dimensions and cross-sections as shown on the Drawings and/or as directed by the S.O..
- 2.4.2. Crushed aggregate roadbase material shall be crushed rock, crushed gravel or a mixture of crushed rock and gravel, which shall be hard, durable, clean and essentially free from clay and other deleterious materials. The material shall conform to the following physical and mechanical quality requirements:
  - 2.4.2.1. The plasticity index when tested in accordance with *BS 1377* shall be not more than 6.
  - 2.4.2.2. The aggregate crushing value when tested in accordance with *MS 30* shall be not more than 25%.
  - 2.4.2.3. The flakiness index when tested in accordance with *MS 30* shall be not more than 25%.
  - 2.4.2.4. The weighted average loss of weight in the magnesium sulfate soundness test (5 cycles) when tested in accordance with *AASHTO Test Method T 104* shall be not more than 18%.
  - 2.4.2.5. The material shall have a CBR value of not less than 80% when compacted to 95% of the maximum dry density determined in the *BS 1377* Compaction Test (4.5kg rammer method) and soaked for 4 days under a surcharge of 4.5kg.
  - 2.4.2.6. The sand equivalent of aggregate fraction passing the No. 4 (4.75mm) sieve when tested in accordance with *ASTM D 2419* shall be not less than 45%.

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2.4.2.7. The gradation shall comply with the envelope as shown in **Table P3**.

**Table P3.** Gradation Limits for Crushed Aggregate Roadbase

B.S. Sieve Size (mm)	Percentage Passing by Weight
50.0	100
37.5	85 - 100
28.0	70 - 100
20.0	60 - 90
10.0	40 - 65
5.0	30 - 55
2.00	20 - 40
0.425	10 - 25
0.075	2 - 10

The particle size shall be determined by the washing and sieving method of *BS 1377*.

- 2.4.3. Prior to placing any crushed aggregate roadbase material, the subbase shall have been constructed in accordance with the provisions of subsection 2.3..
- 2.4.4. Crushed aggregate roadbase shall be placed to the required width and thickness as shown on the Drawings or directed by the S.O. in one layer or more, each layer not exceeding 200mm compacted thickness.
- 2.4.5. Where two or more layers are required, each layer shall be of approximately equal thickness and none shall be less than 100mm compacted thickness.
- 2.4.6. The material shall be spread using a motor grader of sufficient capacity or other approved mechanical spreader, at the optimum moisture content  $\pm 1\%$ .
- 2.4.7. Compaction shall be carried out using suitable approved equipment, in a longitudinal direction, and begin at the lower edges and progress towards the crown, or in the case of superelevation towards the upper edge, in such a manner that each section receives equal compactive effort, sufficient to produce a density of not less than 95% of the maximum dry density as determined by *BS 1377: Test 13*.
- 2.4.8. Throughout the placing, adjustment of moisture content and compaction of crushed aggregate roadbase material, care shall be taken to maintain a uniform gradation of the material and prevent its separation into coarse and fine parts, all to the satisfaction of the S.O..
- 2.4.9. The crushed aggregate roadbase width shall be everywhere at least that specified or shown on the Drawings on both sides of the centre-line; and its average thickness over any 100m length shall be not less than the required thickness.
- 2.4.10. The surface of the roadbase shall on completion of compaction and immediately before placing bituminous surfacing be well closed and free from movement under the compaction plant and from ridges, cracks, loose material, pot holes, ruts other defects.
- 2.4.11. All loose, segregated or otherwise defective areas shall be removed to the full thickness of the layer, and new material laid and compacted. The



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addition of fine material will not be permitted.

2.4.12. The surface shall be to the required level and grade and comply with the tolerances as specified in sub-section 3.2..

2.5. Wet-Mix Roadbase

2.5.1. This works shall consist of furnishing, placing, compacting wet-mix roadbase on a prepared and accepted sub-base in accordance with this Specification and the lines and levels as shown on the Drawings and/or as directed by the S.O..

2.5.2. Aggregate for wet-mix roadbase shall be crushed rock, crushed gravel or a mixture of crushed rock and gravel, which shall be hard, durable, clean and essentially free from clay and other deleterious materials.

2.5.3. The aggregate shall conform to the following physical and mechanical quality requirements:

2.5.3.1. The flakiness index when tested in accordance with *MS 30* shall be not more than 25%.

2.5.3.2. The aggregate crushing value when tested in accordance with *MS 30* shall be not more than 25%.

2.5.3.3. The weighted average loss of weight in the magnesium sulfate soundness test (5 cycles) when tested in accordance with *AASHTO Test Method T 104* shall be not more than 18%.

2.5.3.4. The sand equivalent of aggregate fraction passing the No. 4 (4.75mm) sieve when tested in accordance with *ASTM D 2419* shall be not less than 45%.

2.5.3.5. The gradation shall comply with the limits shown in **Table P4**.

**Table P4.** Gradation Limit for Wet-Mix Roadbase

B.S. Sieve Size (mm)	Percentage by Weight Passing
50.0	100
37.5	95 - 100
20.0	60 - 80
10.0	40 - 60
5.0	25 - 40
2.36	15 - 30
0.060	8 - 22
0.075	0 - 8

The particle size shall be determined by the washing and sieving method of *BS 1377*.

2.5.4. Notwithstanding any earlier approval of finished sub-base, prior to placing wet-mix roadbase material, any damage to or deterioration of the sub-base shall be made good in accordance with sub-section 2.3..

2.5.5. Wet-mix roadbase material shall be placed to the required width and thickness as shown on the Drawings or as directed by the S.O. in one layer or more, each layer not exceeding 200mm compacted thickness. Where two or more layers are required, they shall be of approximately

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equal thickness and none shall be less than 100mm compacted thickness.

- 2.5.6. The material shall be laid using a paving machine at moisture content + 0.5% of the optimum which shall be maintained during the compaction operation.
- 2.5.7. Compaction shall be carried out using suitable approved equipment in a longitudinal direction, and begin at the lower edges and progress towards the crown, or in the case of superelevation towards the upper edge, in such a manner that each section receives equal compactive effort, sufficient to produce a density of not less than 95% of the maximum dry density as determined by *BS 1377: Test 13*.
- 2.5.8. Throughout the placing, and compaction of wet-mix roadbase material, care shall be taken to maintain a uniform gradation of the material and prevent its separation into coarse and fine parts.
- 2.5.9. All loose, segregated or otherwise defective areas shall be removed to the full thickness of the layer, and new wet-mix roadbase material laid and compacted, the addition of fine aggregate only shall not be permitted.
- 2.5.10. The wet-mix roadbase width shall be everywhere at least that specified or shown on the Drawings on both sides of the centre-line. The average thickness measured over any 100m length shall be not less than shown on the Drawings or specified and the minimum thickness measured at any one point shall be not less than the thickness shown on the drawing or specified **Table P5**.
- 2.5.11. The surface of the wet-mix roadbase shall, on completion of compaction and immediately before placing bituminous surfacing, be well closed and free from movement under the compaction plant and from ridges, cracks, loose material, pot holes, ruts or other defects.
- 2.5.12. The surface shall be to the required level and grade and comply with the tolerances specified in sub-section 3.2..
- 2.6. Bituminous Pavement Courses
- 2.6.1. Bituminous Prime Coat
- 2.6.1.1. This work shall consist of the careful and thorough cleaning of the surface of a prepared and accepted unbound roadbase and cement-treated base (CTB), and the furnishing and application to the cleaned roadbase and CTB surface of a bituminous prime coat, all in accordance with this Specification and the lines, dimensions and cross-sections as shown on the Drawings and/or as directed by the S.O..
- 2.6.1.2. The materials, equipment and construction methods shall be in accordance with *Standard Specification for Roadworks Section 4: Flexible Pavement JKR Specification No. JKR/SPJ/2008-S4*.
- 2.6.2. Bituminous Tack Coat
- 2.6.2.1. This work shall consist of the careful and thorough cleaning of the surface of a prepared and accepted bituminous or bitumen primed pavement course, and the furnishing and application to the cleaned surface of a bituminous tack coat prior to the



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construction of an overlying bituminous pavement course, all in accordance with this Specification and the lines, dimensions and cross-sections as shown on the Drawings and/or as required by the S.O..

2.6.2.2. The materials, equipment and construction methods shall be in accordance with *Standard Specification for Roadworks Section 4: Flexible Pavement JKR Specification No. JKR/SPJ/2008-S4*.

### 2.6.3. Asphaltic Concrete

2.6.3.1. This work shall consist of furnishing, placing, shaping and compacting asphaltic concrete binder course and/or wearing course on a prepared and accepted bituminous or bitumen primed pavement course, and shall include the careful and thorough cleaning of surfaces which are to be covered prior to the application of bituminous prime coat and tack coat. The work shall be carried out all in accordance with this Specification and the lines, levels, grades, dimensions and cross-sections as shown on the Drawings and/or as required by the S.O..

2.6.3.2. The materials, mix design, equipment and construction methods shall be in accordance with JKR Specification No. *JKR/SPJ/2008-S4*.

## 3. Horizontal Alignment, Surface Levels and Surface Regularity Of Pavement Courses

### 3.1. Horizontal Alignment

3.1.1. The horizontal alignment shall be determined from the centerline of the pavement surface shown on the Drawings. The edges of the pavement as constructed and all other parallel construction lines shall be correct within a tolerance of + 50mm and - 0mm from the centre-line, except for kerbs, channel blocks and edge lines which shall be laid with a smooth alignment within a tolerance of + 25mm and - 0mm from the centre-line.

### 3.2. Surface Levels of Pavement Courses

3.2.1. The design levels of pavement courses shall be calculated from the vertical profile, crossfall and pavement course thicknesses shown on the Drawings. Crossfall for hardstanding shall be constructed at a minimum of 2.5% gradient from the highest point of the area or as approved by S.O.. The level of any point on the constructed surface of a pavement course shall be the design level subject to the appropriate tolerances given in **Table P5**.

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**Table P5.** Tolerances in Surface Levels of Pavement Courses

Pavement Course	Tolerance
Wearing Course Binder Course Roadbase Sub-base	± 5mm ± 5mm + 0mm to - 20mm + 10mm to - 20mm

3.2.2. The combination of permitted tolerances in the levels of different pavement courses shall not result in a pavement thickness less than that shown on the Drawings. Each pavement course shall have an average thickness not less than that shown on the Drawings.

#### 4. Shoulders

4.1. This work shall consist of furnishing, compacting and shaping earth, gravel or paved shoulder material on a prepared and accepted sub-base or subgrade, all in accordance with this Specification and the lines, levels, grades, dimensions and cross-sections as shown on the Drawings and/or as required by the S.O..

##### 4.2. Materials

###### 4.2.1. Paved Shoulders

The bituminous surfacing and underlying pavement courses shall be constructed as described in the appropriate sections of this Specification.

###### 4.2.2. Gravel Shoulders

Gravel shoulder material shall conform to the requirements for gravel surfacing material set forth in *Standard Specification for Roadworks Section 4: Flexible Pavement JKR Specification No. JKR/SPJ/2008-S4*.

###### 4.2.3. Earth Shoulders

Earth shoulder material shall be suitable material as described in *Standard Specification for Roadworks Section 2: Earthworks JKR Specification No. JKR/SPJ/2013-S2*.

###### 4.2.4. Construction

4.2.4.1. Shoulders shall be constructed in stages or in one operation as directed or approved by the S.O., but in no instance shall a shoulder be built up to a level higher than that part of the abutting carriageway structure which has been completed and accepted.

4.2.4.2. Prior to placing any shoulder material, the underlying sub-base or subgrade shall have been shaped and compacted in accordance with the provisions of *Standard Specification for Roadworks Section 2: Earthworks JKR Specification No. JKR/SPJ/2013-S2*, respectively, and the abutting carriageway structure course or courses shall likewise have been shaped and compacted in accordance with the provisions of the appropriate sub-sections of this Specification. Notwithstanding any earlier approval of the underlying and abutting pavement courses, any



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damage to or deterioration of these underlying and abutting pavement courses shall be made good to the satisfaction of the S.O. before shoulder construction proceeds.

- 4.2.4.3. Shoulders shall be placed to the required width and thickness as shown on the Drawings or as directed by the S.O. in one layer or more, each layer not exceeding 200mm compacted thickness at the point of maximum thickness. Where two or more layers are required, they shall be of approximately equal shape and thickness, and none shall be less than 100mm compacted thickness at the point of maximum thickness.
- 4.2.4.4. Each layer of shoulder material shall be processed as necessary to bring its moisture content to a uniform level throughout the material suitable for compaction and shall then be compacted using suitable compaction equipment approved by the S.O. to not less than 95% of the maximum dry density determined in the *BS 1377 Compaction Test* (4.5kg rammer method). Compaction shall be carried out in a longitudinal direction along the shoulder and shall generally begin at the outer edge and progress uniformly towards the carriageway, except on super-elevated curves where rolling shall begin at lower edge and progress uniformly towards the higher edge. In all cases, compaction shall be carried out in such a manner that each section receives compactive effort appropriate to its thickness, all to the satisfaction of the S.O..
- 4.2.4.5. Throughout the placing, adjustment of moisture content and compaction of shoulder material, care shall be taken to maintain a uniform gradation of the material and prevent its separation into coarse and separate parts, all to the satisfaction of the S.O..
- 4.2.4.6. Where shown on the Drawings or directed by the S.O., earth shoulders shall be turfed in accordance with *Standard Specification for Roadworks Section 2: Earthworks JKR Specification No. JKR/SPJ/2013-S2*.
- 4.2.4.7. Shoulders shall be finished in a neat and workmanlike manner. The total width of carriageway and shoulder shall throughout be at least as specified or shown on the Drawings on both sides of the centre-line. The top surface of each shoulder shall throughout have the required shape, super-elevation, levels and grades, within 10mm of the required plane, and shall provide a flush joint with the carriageway surface and shall be uniformly free draining away from the carriageway, all to the satisfaction of the S.O..

## 5. Concrete Pavement

Concrete Pavement works shall be in accordance with *Standard Specification for Road Works JKR Specification No. JKR/SPJ/1988 Section 5: Portland Cement Concrete Pavement*.

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## 6. Road Furniture

### 6.1. Corrugated Sheet Steel Beam Guardrail

The supply and method of installation of guardrails shall be in accordance with *Standard Specification for Road Works Section 6: Road Furniture JKR Specification No. JKR/SPJ/2017-S6.*

### 6.2. Traffic Signs

The supply and method of installation of traffic signs shall be in accordance with *Standard Specification for Road Works Section 6: Road Furniture JKR Specification No. JKR/SPJ/2017-S6.*

### 6.3. Road Markings

The supply and application of road markings shall be in accordance with *Standard Specification for Road Works Section 6: Road Furniture JKR Specification No. JKR/SPJ/2017-S6.*

### 6.4. Concrete Kerb

The supply and installation of concrete kerb shall be in accordance with *Standard Specification for Road Works Section 6: Road Furniture JKR Specification No. JKR/SPJ/2017-S6.*

## 7. Street Lighting

The supply and installation of street lighting shall be in accordance with *Standard Specification for Road Works Section 7: Street Lighting JKR Specification No. JKR/SPJ/2011-S7.*

## 8. Traffic Signal System

The supply and installation of traffic signal system shall be in accordance with *Standard Specification for Road Works Section 8: Traffic Signal System JKR Specification No. JKR/SPJ/2008-S8.*

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## 1. General

- 1.1. All landscaping works shall be as shown on the Drawings. Turfing works and tree planting shall be carried out in such a manner as to minimize risks of damage to turfs and plants, and stunted growth. Turfing on all slopes shall be carried out immediately after slopes are formed. Tree planting shall be carried out as soon as practicable.
- 1.2. All landscaping works shall start as early as possible so that trees and plants are well- grown, and fully adapted to the new environment when the project concerned is handed over upon completion.
- 1.3. All landscaping works shall be furnished, installed and maintained by the Contractor as specified herein, or as shown on the Drawings, using the best horticultural management, giving special attention to planting practices, soil mixtures, and application of agricultural chemicals.
- 1.4. Existing water elements such as lakes, ponds and streams shall be incorporated into the landscape design. Unless otherwise specified, mature existing trees shall be retained and incorporated into the landscape design. Replantation and relocation of the trees removed shall be considered as part of the landscaping works.

## 2. Classifications and Characteristics of Plants

- 2.1. Plants shall mean trees, palms, shrubs, ground covers, and plants of other descriptions to be provided by the Contractor, as shown on the Drawings or listed in the plant schedules.
  - 2.1.1. Each tree shall possess characteristics of its variety and growth typical to such tree. All trees shall be well-branched, with straight trunks characteristic of the species, with well-shaped top and intact leader. The height shall be measured from the stem's earth line to the top of the tree.
  - 2.1.2. Palms shall have vigorous root system, crown of new leaves, proper color of leaves of adult palms, and sufficient hardlines. The height of palms shall be measured from the stem's earth line to the base of the first frond.
  - 2.1.3. Shrubs and vines shall possess characteristics and growth habits typical of their species. All shrubs shall be well-shaped and bushy, with well-spaced branches, and not skinny. The height of shrubs or vines shall be measured from the stem's earth line to the top branches.
  - 2.1.4. Ground cover is defined as any plant or groups of plant, other than grasses, which shall satisfactorily cover the ground, forming a compact and attractive cover.
- 2.2. All plants shall be in healthy growth condition, free from pests and diseases, and shall be representatives of their normal species or variety. All plants shall have well-branched heads and vigorous root systems and shall be injury-free. Unless otherwise shown or specified in the Drawings, only nursery-grown plants shall be used. Plants which are potted or plastic-bag-grown shall not be root-bound.



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**3. Size of Plants**

3.1. The size of plants refers to plant table size that is the size that is required for planting out on sites. All plants shall have the following sizes:

3.1.1. Ground Covers

Ground cover plants can be supplied in plastic bags. If supplied in 150mm - size bags they shall have at least nine (9) cuttings per bag, and not less than 150mm long.

3.1.2. Shrubs

Height of shrubs shall range between 150mm and 1000mm.

3.1.3. Trees

3.1.3.1. Trees shall be either container grown or grown on the open ground. They shall be of the following three types:

(i) Tree saplings

Tree saplings shall mean grown from seedlings or cuttings. They shall have straight main stems of not less than 1200mm in height from the soil level to the lowest branch, and a stem diameter of not less than 12mm, and a well-branching system.

(ii) Rooted Stump Cutting

These refer to plants which can be easily grown from stem cuttings instead of from seeds. They shall have straight main stems of 2400mm to 3000mm in height, with a diameter ranging from 37mm to 50mm.

(iii) Instant Trees

An instant tree is generally referred, to the semi-mature tree with a minimum trunk height of 2000mm for palms (measured from earth line to first frond) and 3000mm for other which shall have well-spread branches.

3.1.4. Palms

3.1.4.1. Palms shall be either container-grown on the open ground, and shall be of two types:

(i) Single-Stem Palm

These refer to palms with single main trunk. Their trunk height shall be not less than 1200mm measured from the earth line to the base of the first frond.

(ii) Cluster Palms

The Palms referred to are those which grow in clusters. They shall have a minimum of three (3) palms clustered



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together, measuring 750mm to 1000mm from the earth line to the base of the first frond.

**4. Handling and Planting**

4.1. Handling

Plants shall be transported, handled and stored in such a manner as to prevent deterioration, damage or contamination. All plant materials shall be carefully protected and, if necessary, wrapped with hessian or gunny cloth during lifting, transportation, unloading and storage on site.

4.2. Planting

4.2.1. Pits/Holes

- 4.2.1.1. Generally, all pits for palms and trees shall not be less than 1000mm x 1000mm or 1/3 size bigger than the root ball, spaced at intervals as shown on the Drawings or approved by the S.O..
- 4.2.1.2. For shrubs, the pit size may be reduced to 500mm x 500mm deep (for big shrubs), or 300mm x 300mm x 300mm deep (for medium shrubs). Alternatively, continuous trench 500mm x 300mm deep respectively, shall be formed where required.
- 4.2.1.3. The bottom of all pits and trenches shall be forked loose to a depth of 300mm prior to backfilling with approved soil mixture before transplanting. All pits and trenches shall be soaked with water before planting.
- 4.2.1.4. Flower beds or trenches shall be made to the size as shown in the Drawings, and to a depth not exceeding 200mm.
- 4.2.1.5. The distance for planting trees and palms shall be between 3000mm to 5000mm unless otherwise specified.
- 4.2.1.6. The distance for planting shrubs shall be between 150mm to 300mm unless otherwise specified.
- 4.2.1.7. For ground covers, planting works shall be carried out in zig-zag manner at distance between 100mm to 150mm unless otherwise specified.
- 4.2.1.8. To install a minimum of 1000mm (H) x 750mm (L) x 750mm (W) of Polyethylene root barrier for trees planting at pavement/hardscape area. eg parking, walkway and sidewalks.

4.2.2. Transplanting

- 4.2.2.1. Transplanting shall not be carried out in very hot, dry weather conditions which may result in initial drying out of the root system and/or scorching of leaves.
- 4.2.2.2. Immediately before transplanting, the plants shall be carefully removed from the nursery bags or pots. The plants shall be placed into the pits and the surround filled with approved black earth making sure that the roots are not excessively disturbed.



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The earth around the base of the stems shall be recessed slightly to facilitate watering.

4.2.3. Plants Supports

All newly plants shall be supported either by staking, tying or guying. Stakes shall be of wood, still or plastic of an approved type, driven into the ground before planting so as not to damage the root ball or aerial parts of plants. Stakes shall be long enough to the plants, with one (1) tie per stake set 150mm from the bottom.

**5. Soil Mixture, Soil Conditioners and Chemical Fertilizers**

5.1. Soil Mixture

Soil mixture for ground planting and backfill shall be in the ratio of 1:3, i.e. 1 part to soil conditioner or organic materials to three (3) parts of top soil. Planter box soil mixture shall be in the ratio of 1:2:3, i.e. one (1) part of sand to two (2) parts soil conditioner or organic materials to three (3) parts top soil.

5.2. Top Soil

Top soil shall consist of fertile and friable topsoil obtained from a well-drained flood-free site excavated from not more than 300mm deep from ground level. It shall be of medium texture and without admixture of stones, lumps, plants or roots, and other extraneous matter. Topsoil material shall be obtained from excavated topsoil sourced or, if not available, from other sources as approved by the S.O..

5.3. Soil Conditioners (Manure and Compost)

Soil Conditioners shall be organic materials such as composed coconut, fiber, peat or other approved materials which shall be composed in a stable condition, free from toxic impurities and containing no substance injurious to plants. The organic matter with 45% - 55% moisture content and with Ph adjusted to 5.5 - 6.5 shall be used. All manure or compost used as additive to the soil mixture shall be procured from an approved source.

5.4. Chemicals Fertilizers

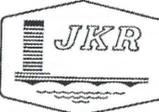
Chemicals fertilizers shall be granular slow release compound fertilizers with a minimum four (4) months release period at 32°C. They shall be stored in waterproof sealed bags and kept under shelter. The Contractor shall submit manufacturer's technical data on the proposed fertilizer for the S.O.'s approval prior to the application of the fertilizer.

**6. Turfing**

6.1. Unless otherwise shown in the Drawings, turfing shall be provided to all exposed earth surfaces throughout the site. All surfaces to be turfed shall be completely cleared of all incidental Contractor's debris, stone and other obstructions.

6.2. The ground to be turfed shall be graded to fall toward surface water discharge line as shown in the Drawings, or approved by the S.O..

6.3. On level ground, minimum gradient of 1:60 shall be provided to eliminate ponding

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hollows. Any undesirable vegetation, debris, stumps or roots shall be grubbed up and removed from the site.

- 6.4. Top soil shall be provided on a prepared surface and compacted to provide a suitable tilt for the growth of the turf. Before spreading the topsoil, the ground is to be trimmed and leveled and all roots of bushes and undesirable growth grubbed up and removed from the site.
- 6.5. All turfs shall be of good, healthy, dense indigenous cow grass (Axon Opus Compresses) from an approved source. The grass shall be of even density, vigorous growth and green in color, forming a turf sufficiently fibrous to hold together when installed. They shall be free from mimosa, weeds or other foreign vegetation.
- 6.6. Each turf shall be approximately 300mm x 300mm x 50mm thick with roots still attached to the soil. They shall be kept moist and in shade and shall be planted within 24 hours of lifting. Samples of turfs to be used shall be submitted to the S.O. for approval before any turfs are brought in for use. The sources of material shall be stated by the Contractor.
- 6.7. Unless otherwise shown in the Drawings, close turfing shall be provided to slopes, and extending 2 m of the platform at the top and bottom of the slope, 1 m the sides of all drains, and 2 m wide of road shoulders, so that they cover the whole area without any space/gap between them.
- 6.8. Each sod shall be pegged in place with wooden/bamboo pegs 12mm diameter and 200mm long through the sod and into the soil base. These pegs shall be removed after the turf have firmly established. On steep slopes, netting in shall be laid onto the turfed areas for protection.
- 6.9. Unless otherwise shown in the Drawings, spot turfing shall be carried out on all level ground. The turf shall be laid at 450mm center, embedded 25mm in the top soil.
- 6.10. Turf shall be fertilized with approved slow release fertilizers high in Nitrogen content, one (1) month after planting at the rate of 60 gm/m<sup>2</sup> and evenly spread over the whole area. Turfs shall be well watered after each fertilizer application which shall be done once in every three months after grass cutting.
- 6.11. Grass cutting shall be done every three weeks after one (1) month growth/establishment by grass cutter/mover as often as in required to give a well trimmed sod not more than 25mm in height for flat surface and not less than 50mm on slope. All clippings shall be removed from the site before watering is carried out.

## **7. Football and Playing Fields**

### **7.1. General**

- 7.1.1. Unless otherwise specified hereinafter, turfing for football and playing fields shall be as specified hereinbefore. Turfing works shall start as soon as possible and shall be completed and fully established not later than three (3) months before the date of completion of the works.
- 7.1.2. The Contractor shall supply and install sub-soil drains as specified hereinafter at the locations and accordance with the lines, levels and grades shown in the Drawings and/or as directed by the S.O..



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### 7.2. Materials

#### 7.2.1. Sub-soil Drain Pipes

Subsoil drain pipes shall be of high-Density Polyethylene (HDPE) perforated corrugated drainage pipe to DIN 16961 PT 1 and 2:1989 or equivalent, or Polyvinyl Chloride (PVC) pipes for subsoil drains complying with AS Specification 2439.1 or BS 3656 or equivalent, of diameter and lengths of pipe as shown on the Drawings.

#### 7.2.2. Filter Materials

Filter Materials shall consist of an angular, clean, hard and durable crush rock with uniformly sized particle of 14mm, free from lumps of clay or organic matter.

#### 7.2.3. Geo Textile Fabric

Geo textile fabric shall be of non-woven type thermally bonded with minimum weight of 100 g/m<sup>2</sup> or equivalent and shall be of approved manufacturer.

### 7.3. Site Preparation

The site area shall be completely cleared of all debris, large stones, discarded gravel and other unacceptable materials. The site shall then be graded to form a crown at the centre of the field with a minimum gradient of 1:300. The soil shall be of good texture and structure with the majority of the crumbs of size 1mm to 2mm and not contaminated with seeds, stolon or rhizomes of noxious weeds.

### 7.4. Trenching for Sub-soil Drain Pipes

Trenches shall be excavated and trimmed clean true to grade and alignment and the geo textile fabric shall be laid as shown on the Drawings. The fabric shall overlap the full width of the trench at the top. Where the fabric requires jointing along the trench, it shall overlap a minimum of 500mm at the joint.

### 7.5. Laying and Jointing Subsoil Drain Pipe

Subsoil pipe shall be laid and bedded as shown on the Drawings. Subsoil drain pipe shall be jointed according to the manufacturer's recommendations.

### 7.6. Backfilling

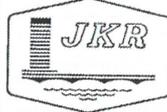
The trench shall be backfilled with the filter material in layers not exceeding 150mm loose thickness and uniformly compacted by suitable method approved by the S.O. to the level as shown in the Drawings. Care shall be taken that the pipe is not damaged or displaced.

### 7.7. Outlets

Outlets shall be constructed as shown in the Drawings and to the S.O.'s approval.

### 7.8. Laying of Sand and Turf Mixture

7.8.1. The prepared surface of the field shall be laid with a first layer of 100mm thick river sand or other suitable coarse grained granular materials and a second layer of 100mm thick turf mixture before receiving the turf.

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7.8.2. The Contactor surface shall carry out final gradient check prior to the turfing works.

7.8.3. Before turfing works commence, the Contractor shall submit samples of the turf mixture for the approval of the S.O.. The turf mixture shall be laid to the required formation level and gradient.

7.8.4. The turf mixture shall have the following composition by weight of 4% - 5% organic matter, 12% - 15% clay and 81% - 85% river sand. The PH value for the root zone medium shall be 5 to 7.5.

7.9. Inspections

7.9.1. The Contractor shall give not less than twenty-four (24) hour notice prior to the commencement and upon completion of the under mentioned works. The Contractor shall not proceed with the next succeeding operation until specific approval has been given for the following:

7.9.1.1. Trench excavation.

7.9.1.2. Trench lining with geo textile fabric and laying of subsoil drain pipe

7.9.1.3. Filter material backfill

7.9.1.4. Sand laying

7.9.1.5. Turf mixture

7.9.1.6. Turfing work

7.10. Levelling of Field

7.10.1. The Contractors shall water the turf at least twice a day or as instructed by the S.O.. The rate of application and frequency of watering shall be sufficient to maintain the turf mixture in a moist condition to ensure proper and healthy growth of the turf even during the dry weather.

7.10.2. Water shall be applied as fine spray by means of suitable pumps and hose or sprinkler or any other method approved by the S.O. so as not to disturb the turf mixture.

7.11. Weed Control

Weeding shall be carried out on the newly turfed area about ten (10) days after planting to get rid of foreign species and maintain a pure culture of Axonopus Compressus (Cow Grass). Weeding on a Continuous basis shall be carried out to prevent weeds from growing.

7.12. Fertilization

The first fertilization shall be carried out two (2) weeks after planting, using mechanical spreader. Subsequently, the fertilizer shall be applied at three (3) weeks interval.



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7.13. Mowing

- 7.13.1. Mowing shall be carried out using properly sharpened and adjusted machine tools so that the turf is cut cleanly, and no tearing takes place.
- 7.13.2. The first cut shall be carried out when the turf reaches 50mm – 70mm in height. The turf shall be cut to 25mm – 30mm in height. Subsequently, mowing shall be done at least once in every two (2) weeks.

7.14. Top Dressing

The Contractor shall, from time to time or whenever directed by the S.O. check the flatness of the field and if found uneven, rectify by top dressing with turf mixture and followed by proper compaction.

7.15. Maintenance during Defect Liability Period

- 7.15.1. The Contractor shall be responsible for carrying out full-time intensive maintenance of the turfing works for the entire duration of the Defect Liability Period of the Works.
- 7.15.2. The maintenance includes watering, weed control, fertilization, mowing and top dressing, all as specified hereinbefore.

7.16. Handing Over of the Works

On handing over of the works, the field shall be in good playable condition with all the full line markings to the dimensions as shown on the Drawings.

**8. Relocation and Protection of Existing Trees**

8.1. Relocation of Trees

- 8.1.1. Where shown in the Drawings or if directed by the S.O., all existing trees having girth of 300mm and below identified and marked for relocation, shall not be cut, but shall be dug up, prepared for, and relocated by the Contractor to other areas within, or in the vicinity of the site. In the event of any such trees being accidentally cut or damaged, the same shall be replaced with trees of equivalent size and species by the Contractor.
- 8.1.2. The Contractor shall protect and maintain the relocated trees by fencing to a height of 1.2m, watering, manuring, pruning, and other necessary treatments throughout the contract period (including the Defects Liability Period) until satisfactory, growth is established. Any relocated trees which damage are accidentally or fail to re-grow satisfactorily within the Defect Liability Period, shall be replaced accordingly at the Contractor own cost.

8.2. Protection of Trees Retained on Site

- 8.2.1. All existing trees having girth of 800mm and above identified and marked by the S.O. or as shown in the Drawings to be retained on site, shall be protected and maintained by fencing to a height of 1.2m, watering manuring, pruning and other necessary treatments throughout the contract (including the Defects Liability Period) so as not to jeopardize their growth.
- 8.2.2. The ground around the tree spread shall be protected to prevent contamination from materials and chemicals detrimental to plant growth.

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Method of protection shall be to the approval of the S.O. in the event of any such trees being accidentally or otherwise out or damaged, the same shall be replaced by the Contractor with trees equivalent size and species at his own cost.

## 9. Maintenance of Plant and Turf

### 9.1. General

- 9.1.1. After planting and prior to the onset of the maintenance period, the Contractor shall be responsible for carrying out all necessary measures to ensure that all plant materials and turfing thrive and become established, and that the landscaped areas are kept in a clean and tidy condition.
- 9.1.2. The Contractor shall protect and maintain the plants and turfing from any damage and destruction, by way of watering, manuring and tilling, any by staking and fencing, where necessary, to support and protect the plants, until the end of the Defects Liability Period. All plants and turfs which are defective and/ or fail to grow within the Defect Liability Period or as instructed by the S.O. shall be replaced immediately and/ or replanted accordingly, at the Contractor's own cost.
- 9.1.3. Unless otherwise specified, all maintenance works shall be carried out complying to the minimum standard as detailed out in the '*Garis Panduan Pengurusan Dan Penyelenggaraan Projek Landskap*' (latest edition) by Jabatan Perancang Bandar & Desa, Kementerian Perumahan Dan Kerajaan Tempatan. During the Defects Liability Period, the Contractor is required to implement the maintenance works as follows:
  - 9.1.3.1. Water the plants twice (2) per day.
  - 9.1.3.2. Feeding the plants with fertilizers (NPK Green) 15:15:15 once (1) every month for the first six (6) months and as needed after six (6) months onwards. Application of the fertilizer shall be as specified hereinafter, and as recommended by the fertilizer manufacturer.
  - 9.1.3.3. Weeding/Hoeing and Site Cleaning
  - 9.1.3.4. Disease and Pest Control
  - 9.1.3.5. Plants Replacement
  - 9.1.3.6. Mulching
  - 9.1.3.7. Trimming/Pruning
- 9.1.4. The Contractor shall provide persons who are competent and experienced for organizing and running the maintenance programs during the Defects Liability Period, at the Contractor's own cost.
- 9.1.5. The Contractor shall be responsible for the use of all materials, labour and equipment. Any injury to plants caused by such materials, labour and equipment shall be corrected and repaired at the Contractor's own cost.
- 9.1.6. The Contractor shall carry out all necessary measures to ensure that all plants thrive and become established within this period. All landscaped



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areas shall be inspected at monthly intervals and lists of remedial works shall be issued upon each inspection within seven (7) working days. All items on the remedial work list shall be executed before the next scheduled inspection.

**9.2. Weeding and Hoeing**

Weeding and hoeing shall be done frequently, depending on weed growth or whenever directed to do so by the S.O.. The Contractor shall be responsible for maintaining areas close the base of trees or shrubs. Weeding shall be done manually either by hand, hoe or garden tools at least once a month, with care taken not to wound plant stems.

**9.3. Fertilizers and Application Rate**

9.3.1. Feedings to plants shall be done with approved organic manure or slow release fertilizers at regular intervals to maintain healthy growth. The S.O. reserves the right to request the Contractors to use any kind of fertilizer, let it be straight mixture, complex or slow release, at the Contractor's own cost.

9.3.2. Six (6) applications shall be required during the maintenance period. The first shall be carried out during the second (2nd) month after planting. The second and subsequent applications shall be worked into the soil above the roots and lightly watered in. the fertilizer shall be applied, preferable, when the plants are in their active stage of growth.

9.3.3. Slow release fertilizers shall be applied strictly in accordance with the manufacturer's directions and recommendations.

9.3.4. The Contractor shall take note that plant feeding shall be carried out only after all other maintenance works like weeding, hoeing and trimming or pruning have been carried out.

**10. Final Handing Over**

10.1. Two weeks before the expiry of the Defects Liability Period a joint final inspection shall be held with the S.O. to review the requirements for any alteration or replacement in order to gain approval for Final Handing Over.

10.2. At the time of Final Inspection, all areas under this contract shall be free from weeds, neatly cultivated and raked, and all plant boxes in good order. Grass shall be neatly cut and all clippings removed. No bare patches of earth shall be visible in turf or planting areas unless otherwise specified.

10.3. If any portions of the works are found to be not acceptable, under the terms and intent of the Drawings and specifications, the Contractor shall carry out immediate remedial works to S.O.'s acceptance before the date of Final Handing Over. The cost of all remedial works shall be borne by the Contractor.

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**1. General**

- 1.1. All drainage works shall be in accordance with the *JKR Standard Specification for Drainage Works in Building Projects No. 20601-0195-13* and conform to the requirements of the *Urban Stormwater Management Manual for Malaysia (MSMA)* and *MS 2526*.
- 1.2. The works shall include the construction of surface drains, sumps, culverts, subsoil drains, and other drainage structures in accordance with the above requirements or as directed by the S.O..
- 1.3. Drainage works shall be constructed to the lines, levels, grades and cross-sections shown on the Drawings or to suit the site as approved by the S.O..
- 1.4. Final discharge point shall be identified and approved by the relevant Local Authorities. Where necessary, the existing drainage system shall be upgraded in order to ensure they are fully functional.

**2. Excavation and Backfilling**

- 2.1. All general excavation works shall be as specified in SECTION B: EXCAVATION AND EARTHWORKS.
- 2.2. The Contractor shall notify the S.O. sufficiently in advance of the beginning of any excavation so that cross-section elevations and measurements shall be taken of undisturbed ground. The natural ground adjacent to the structure shall not be disturbed without permission of the S.O.. The excavation works shall be carried out so as not to cause any danger or obstruction to the traffic or public.
- 2.3. All excavation shall be inspected and approved by the S.O. prior to further work being carried out.
  - 2.3.1. Excavation of Hard Materials/Rock
    - 2.3.1.1. Hard materials/rock encountered in the trench excavation shall be removed to the approval of the S.O.. Layer of rock encountered along the bottom of the excavation shall be cut and trimmed to the required level.
    - 2.3.1.2. Voids formed at bottom of the trench due to the removal of rocks shall be backfilled to the required level with 20mm Grade 20P concrete or other suitable materials, well rammed and compacted all to the approval of the S.O..
    - 2.3.1.3. Jagged surfaces of rocks at the bottom of the excavation due to the trimming shall be levelled and smoothed with sand blinding to the approval of the S.O..
  - 2.3.2. Excavation of Soft Materials
 

When, in the opinion of the S.O. the foundation material is soft or otherwise unsuitable, the Contractor shall remove and insert foundation fill material or concrete as specified or shown on the Drawings or directed by the S.O.. It shall be placed and compacted in layers not more than 150mm thick or as directed by the S.O..



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### 2.4. Excavation for Drain Trenches

- 2.4.1. The trench shall be excavated to a depth intended or shown on the Drawings. The blinding material shall be laid immediately after the excavation.
- 2.4.2. Should the bottom of the trench be inadvertently excavated below the specified level, it should be brought back at the Contractor's expense to the correct level with good selected earth or sand, carefully rammed into place.

### 2.5. Excavation for Culvert

- 2.5.1. The earthworks at the required location shall be constructed to a level at least 600mm above the top of culverts design levels or to the top of subgrade levels, whichever is lower. The culverts specified to be constructed in trench conditions shall be excavated in accordance with sub-section 2.6..
- 2.5.2. Where drainage conditions or other circumstances so require, the S.O. shall direct the Contractor to construct the culvert without first constructing the earthworks to the level specified above, in which case excavation, and foundation preparation shall be in accordance with sub-section 2.7..

### 2.6. Trench Method

- 2.6.1. The trench to receive culvert shall have sufficient width and depth to enable the placing of bedding material. The bottom of the trench shall be trimmed to suitably smooth plane surface which shall be kept free from water, all to the satisfaction of the S.O..
- 2.6.2. Rock or other hard material encountered shall be excavated to a depth as directed by S.O.. The excavated hard material shall be replaced with suitable material uniformly compacted in layers of not more than 150mm compacted thickness to provide satisfactory support for the culvert, all to the satisfaction of the S.O..

### 2.7. Open Ground Method

- 2.7.1. Where existing ground levels are above top bedding material design levels and firm foundation materials are encountered, excavation and foundation preparation shall be similar to the described in trench method above. Otherwise a firm foundation plane shall be prepared, which shall be essentially free draining along the line of the culvert by trimming the existing ground, or such fill as it is necessary to place and compact, over a width sufficient to permit satisfactory construction of the pipe bedding, all to the satisfaction of the S.O..
- 2.7.2. Where soft or unstable soil is encountered in the foundation, it shall be excavated over a width of at least 1.5 times the outside of each side of the culvert centre-line to the depth directed by the S.O., and replaced with suitable material uniformly compacted in layers of not more than 150mm compacted thickness to provide satisfactory support for the pipe, all to the satisfaction of the S.O..

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## 2.8. Backfilling

- 2.8.1. Drainage trenches shall be backfilled immediately after completion of drain laying or installation of culverts and as soon as the S.O. has inspected and given his approval.
- 2.8.2. Backfilling with approved fill materials shall be placed evenly in layers not exceeding 150mm. To provide uniform support, loose thickness of fill materials on both sides of the drain shall be thoroughly compacted with mechanical rammers. This procedure shall be followed for the whole depth of drain section.
- 2.8.3. All spaces excavated under this Specification and not occupied by a permanent structure shall be backfilled with material free from large lumps, wood and extraneous material.

## 3. Materials

### 3.1. Basic construction materials shall comprise the following;

#### 3.1.1. Granular Bedding Material

The foundations shall be of granular bedding material suitably graded broken rubble, crushed stone, crushed gravel, sand or other material as shown on the Drawings or as directed by the S.O..

#### 3.1.2. Concrete

Concrete for blinding, bedding and cast-in-situ drains shall be as shown in the Drawings and as specified in SECTION D: CONCRETING.

#### 3.1.3. Ordinary Backfill Material

3.1.3.1. Ordinary backfill material shall be of suitable material as defined in SECTION B: EXCAVATION & EARTHWORK.

3.1.3.2. Materials from swamps, peats or top soils and other highly organic clay or silt, materials containing logs, stumps or boulders, which are susceptible to combustion, and any other materials which, by virtue of their physical or chemical composition or at their moisture content will not compact properly, shall not be used for filling.

#### 3.1.4. Granular Backfill Material

3.1.4.1. Granular backfill material shall be sand, crushed stone, crushed gravel or a mixture of crushed and natural aggregates, shall be essentially free from vegetative and other organic matter and clay, and shall not contain lateritic or concretionary materials. The material shall conform to the following physical and mechanical quality requirements:

- (i) The fines shall be non-plastic;
- (ii) Sand shall have a gradation conforming to the envelope shown in **Table S1**;



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(iii) Material other than sand shall have a gradation conforming to one of the envelopes shown in **Table S2**.

**Table S1.** Grading Limits for Sand Backfill

B.S. Sieve Size	% Passing by Weight
10.0mm	100
5.0mm	90 - 100
1.18mm	45 - 80
300 µm	10 - 30
150 µm	2 - 10

**Table S2.** Grading Limit for Granular Backfill other than Sand

B.S Sieve Size	% Passing by Weight		
	A	B	C
37.5mm	100	-	-
28.0mm	70 - 100	100	-
20.0mm	60 - 90	70 - 100	100
10.0mm	45 - 75	45 - 75	-
5.0mm	30 - 60	35 - 65	45 - 75
2.0mm	20 - 50	25 - 50	30 - 60
425 µm	10 - 30	10 - 30	15 - 35
75 µm	0 - 2	0 - 2	0 - 2

3.1.4.2. The granular backfill shall be placed in layers not to exceed 150mm in depth and each layer shall be thoroughly compacted by means of packers or mechanical tampers to a relative compaction of not less than 95% Standard Proctor Density for the backfill material at optimum moisture content.

**4. Surface Drainage**

- 4.1. Surface drains shall be constructed with regard to both operation and ease of maintenance and adequate gradient shall be provided to enable self-cleansing flow.
- 4.2. Where gradient designed is not practical or above the finished level, the Contractor shall submit their proposal for the approval of the S.O..
- 4.3. Reinforced concrete struts shall be provided for all drain side walls exceeding 0.9m height. Handrails shall be provided for open drains more than 1.2m width and / or maximum depth as specified in **Table S3**.

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**Table S3.** Maximum Depths of Open Drain

Cover/Handrail Fence Condition	Maximum Depth (m)
Without protective covering	0.6
With solid or grated cover	1.2

#### 4.4. Types of Surface Drains

4.4.1. Surface drains of all types shown on the Drawings shall be constructed either unlined or lined using cast in situ concrete, precast or porous concrete drain sections or stone pitching.

#### 4.4.2. Unlined (Earth) Drains

4.4.2.1. The Contractor shall refer to approved plans for location, extent and construction details as shown on the Drawing, or otherwise directed by the S.O..

4.4.2.2. Excavation for unlined/earth drains shall be trimmed to form a smooth, firm surface to the required lines, levels, grades and cross-sections as shown on the Drawings or as directed by the S.O..

4.4.2.3. Any areas of over excavation shall be made good to the satisfaction of the S.O., all at the contractor's own cost.

4.4.2.4. The sides of cut drain shall not be steeper than 1:1.5 (V:H), while fill slopes shall not be steeper than 1:2 (V:H). The surface water shall be discharges to a stable outlet such that soil erosion is prevented from occurring.

#### 4.4.3. Lined Drain

4.4.3.1. Lined drains shall be constructed from material proven to be structurally sound and durable and have satisfactory jointing systems. Unless otherwise stated in the Drawings, the maximum steepness of the side slopes for lined open drains shall be as indicated in **Table S4**.

**Table S4.** Maximum Steepness of the Side Slopes

Drain lining	Maximum steepness of the maximum side slopes (V:H)
Concrete, brickwork and blockwork	Vertical
Stone Pitching	1:1.5
Grassed/Vegetated, rock riprap	1:2

4.4.3.2. All concrete works shall conform to the requirement in SECTION D: CONCRETING of this Specification or unless otherwise specified.



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4.4.3.3. Lined drains shall be constructed by the following means;

- (i) Cast In Situ Concrete Drains
  - a) Cast in-situ concrete drains shall be Grade 25P concrete unless otherwise stated. Weep holes shall be cast in-situ as shown on the Drawings or as directed by the S.O..
  - b) Where the concrete grade is found to be of the lower grade, the S.O. shall request the Contractor to do the rectification work according to the requested proper method.
- (ii) Precast Concrete Drain
  - a) Precast concrete block inverts shall be of the shapes and dimensions as shown on the Drawing and shall be of Grade C20/25 concrete or unless otherwise specified.
  - b) The joint shall be grouted with cement mortar (1:3) and weep holes shall be provided as shown on the Drawing or as directed by the S.O..
  - c) The S.O. shall have access to the casting yards where the proprietary precast concrete product are being utilized. A copy of the manufacturer's test certificate shall be provided to the S.O..
  - d) All inspections shall be conducted in the present of the S.O. and any rectification works shall be carried out in accordance to the method as approved by the S.O..
- (iii) Cascade Drains

Cascade drains shall be constructed from precast concrete drain units and laid stepping on a 150mm thick bed of mass concrete of Grade 20P or as shown on the Drawings or as approved by the S.O..

## 5. Subsoil Drain

- 5.1. This work shall include supply and installation of subsoil drains, constructed in accordance with these Specifications at locations and in accordance with the lines, levels and grades as shown on the Drawing and/or to suit the site as approved by the S.O..
- 5.2. Minimum gradient of 1:200 shall be provided for the drain to discharge into existing stormwater system, open drain, creek or pond in the area unless otherwise stated on the drawings. The discharge shall not create an unwanted bog.

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## 6. Sumps

- 6.1. Sumps shall be constructed as accordance to the Drawing or as directed by the S.O. to facilitate changes in level and flow within a drainage system. All sumps shall be covered either by concrete slab or galvanized steel grating hinged to the seating frame on the sumps for safety purposes.
- 6.2. Unless otherwise as shown on the Drawings, sumps of depth less than 1.5m (internal depth) shall be made up of brickwalls of minimum 225mm thickness. Sump of depth (internal depth) more than 1.5m shall use reinforced concrete Grade 20P or otherwise specified in the Drawings.

## 7. Culverts

- 7.1. The work shall comprise of supply and installation of either reinforced concrete pipe culverts or precast box culverts, including the end treatment components such as headwall, wingwalls, aprons and sumps and channel protection works, all in accordance with these Specifications and details as shown on the Drawings.
- 7.2. Culvert Bedding
  - 7.2.1. Type A bedding shall consist of Grade 20P concrete otherwise stated on the drawings and complying with SECTION D: CONCRETING.
  - 7.2.2. Type B bedding shall consist of clean, natural sand or gravelly sand of suitable gradation and quality with maximum particle size of not more than 20mm.
- 7.3. Culvert Components
 

Culvert shall be constructed with barrel and end treatments including headwalls, endwalls, wingwalls, outlet protection, inlet improvement and debris control structures.
- 7.4. Pipe Culverts
  - 7.4.1. Reinforced concrete pipes shall conform to the requirement of *MS EN 1916* and shall be approved by the S.O..
  - 7.4.2. The S.O. reserves the right to request for test certificates and further tests to be carried out on samples, all at the Contractor's own cost.
- 7.5. Precast Box Culverts
  - 7.5.1. Precast box culverts shall conform to the requirement of *MS 1293-1* and shall be approved by the S.O..
  - 7.5.2. Unless otherwise shown on the Drawings, the precast box culvert shall be capable of withstanding a proof load test of 112.5kN applied over an area of 320mm x 320mm at any position on the cover slab.
  - 7.5.3. The S.O. reserves the right to request for test certificates and further tests to be carried out on samples, all at the Contractor's own cost.
  - 7.5.4. Individual sections of the precast box culvert shall be rejected because of such defects specified herein before for pipe culverts.



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- 7.5.5. Precast box culverts shall be laid on Type B bedding with layer of crushed aggregate of maximum particle size not exceeding 50mm as shown on the Drawings or directed by the S.O..
- 7.5.6. The maximum gap between each culvert shall not be more than 13mm and the difference in level shall less than 3mm. The gap shall be filled with cement mortar (1:3) with smooth finished.
- 7.5.7. To ensure uniform bearing, a layer of cement grout shall be spread along the top of the walls of the invert where the lid shall sit.

### 8. On-Site Detention

- 8.1. On-site detention (OSD) facilities shall be constructed in accordance to the Drawings and conform to the requirements of *MSMA* and *MS 2526*.
- 8.2. The construction of OSD facilities shall include the system components at the inlet, storage and outlet zone to cater outflow discharges without causing adverse effects on downstream properties. Fencing and warning signs shall be provided as shown on the Drawings.
- 8.3. Maintenance shall be done periodically or as and when the silt has accumulated to 0.3m thick. The desilted material shall be transported to disposal site approved by S.O..

**REKOD PENGALAMAN KERJA  
DALAM 5 TAHUN LEPAS –  
BORANG D**

**BORANG D – REKOD PENGALAMAN KERJA PENYEBUTHARGA**

(Senarai semua kerja yang disiapkan dalam 5 tahun lepas +)

Bil.	Nama	Nilai Kontrak (RM)	Nilai Penyebutharga* Bertanggungjawab	Tempoh Kontrak **	Tarikh Milik Tapak	Tarikh Siap		Nama dan Alamat Penguasa/ Jurutera Perunding	Nama Alamat Majikan
						Kontrak	Sebenar		

+ Salinan Perakuan/Pengesahan Siap Kerja bagi setiap kerja yang disenaraikan hendaklah disertakan.

\* Hanya perlu diisi sekiranya penyebutharga melaksanakan kerja sebagai ahli syarikat gabungan.

\*\* Tempoh kontrak hendaklah termasuk lanjutan masa yang diuluskan.

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# **SENARAI KAKITANGAN TEKNIKAL - BORANG E**

**BORANG E – KAKITANGAN TEKNIKAL**

(Butir-butir Kakitangan Teknikal Yang Ada Dalam Penggajian Penyebutarga Masa Kini)

*Nama dan No. K/P	Umur	Kelulusan Professional/ Pendidikan**	Tahun Kelulusan	Tarikh Diambil Bekerja	Jawatan yang Disandang/ Tugas semasa	Pengalaman Lepas (Jawatan disandang, Nama projek dan majikan dan tempoh Bekerja dan sebagainya)
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

\* Salinan Borang KWSP `A` setiap pekerja bagi bulan caruman terakhir dan salinan perjanjian perkhidmatan ahli professional yang diambil khidmat secara kontrak hendaklah disertakan.

\*\* Sila sertakan salinan Sijil Kelulusan atau Sijil Keahlian Badan-badan Professional

**SENARAI KEEMPUNYAAN LOJI  
DAN PERALATAN UTAMA -  
BORANG F**

**BORANG F – KEEMPUNYAAN LOJI DAN PERALATAN PEMBINAAN UTAMA**

(Senarai Loji dan Peralatan Pembinaan Utama kepunyaan Pemanggil yang sesuai yang boleh digunakan untuk projek)

Bil.	Butiran (Jenis, model, buatan dan keupayaan/ saiz)	Dimiliki, Disewa-beli Atau Disewapajak*	Bilangan Setiap satu	Nilai Semasa (RM)	Umur (dari tarikh belian asal)	Tempat simpanan/ digunakan sekarang	Catatan
A.	Loji dan Peralatan Asas ** : i) Lorry / Tipper / Dumper / 4x4 ii) Sky lift						
B.	Loji dan Peralatan lain : i) Drill and Cutter ii) Welding Machine iii) Pneumatic Jackhammers						

\* Salinan kad pendaftaran dan/ atau dokumen-dokumen lain bukti keempunyaan hakmilik penyebutharga atau perjanjian sewabeli/ sewapajak atas setiap Loji dan Peralatan yang disenaraikan hendaklah disertakan.

\*\* Pegawai yang menyediakan Dokumen Sebutharga hendaklah menyenaraikan butiran-butiran Loji dan Peralatan Asas bagi projek berkenaan (tanpa bilangan AKM).

**PRESTASI KERJA SEMASA  
BORANG G**

### BORANG G - SENARAI KERJA/ KONTRAK SEMASA PENYEBUTHARGA

(Senarai semua kerja di dalam tangan/sedang berjalan dan belum siap termasuk kontrak yang baru diawadkan)

Bil	Nama Kontrak/Projek+	Nilai Kontrak (RM)	Nilai Penyebutharga* Bertanggung jawab	Tempoh Kontrak **	Tarikh Milik Tapak	Tarikh Siap Kontrak	Kemajuan Kerja+		Nama dan Alamat Jurutera Projek	Nama dan Alamat Majikan
							Ikut Jadual (%)	Sebenar Dicapai (%)		

\* Hanya perlu diisi sekiranya penyebutharga melaksanakan kerja sebagai ahli syarikat gabungan

\*\* Tempoh Kontrak hendaklah termasuk lanjutan masa yang diluluskan.

+ Peringatan Penting

Bagi setiap kerja semasa dalam tangan yang disenaraikan, penyebutharga wajib mengemukakan Laporan Penyelia Projek seperti format di Borang GA/GA1.

SULIT

**BORANG GA – LAPORAN PENYELIA PROJEK ATAS PRESTASI KERJA (BUKAN PROJEK MSN) SEMASA PENYEBUTHARGA**

(Borang ini hendaklah dilengkapkan oleh Penyelia Projek atau Pembantu Kanannya yang mengawasi projek dan diserahkan kepada Kontraktor dalam satu sampul berlakri untuk disertakan bersama-sama sebutharganya)

Kepada: Pengarah.....  
.....  
.....  
(u/p:.....)

Nama Kontraktor: .....  
Nama Projek Yang Dilaksanakan .....

No. Kontrak :

Harga Kontrak (termasuk anggaran nilai kerja perubahan) : RM .....  
Wang Kos Prima dan Peruntukan Sementara : RM .....  
Nilai Kerja Pembina : RM .....

Tarikh Milik Tapak : ..... Tempoh Kontrak: ..... Minggu  
Tarikh Penyiapan Asal : .....

Lanjutan Masa Yang Telah Diluluskan : ..... hari

Lanjutan Masa Seterusnya:  
Yang difikir/ dijangka layak diperakukan : ..... hari  
Atas Sebab-sebab : (i) .....  
(ii) .....

Kemajuan Kerja (berdasarkan nilai kerja yang telah dilaksanakan):  
Pencapaian sebenar: ..... % Mengikut Jadual: ..... %  
Tarikh Kerja dijangka akan dapat disiapkan: .....

Nilai Bahagian Kerja Yang Telah Siap : RM .....  
Nilai Baki Kerja Yang Belum Siap : RM .....

Ulasan-ulasan mengenai Prestasi Kontraktor:  
(Nyatakan apa-apa kepujian dan/ atau kelemahan kontraktor dan juga apa-apa tindakan/ perakuan yang diambil/ dipertimbang berhubung dengan prestasi Kontraktor melaksanakan Kontrak)

Tandatangan Penyelia Projek : .....

Nama : .....  
Jawatan : .....

Tarikh: .....

SULIT

**BORANG GA1 – LAPORAN JURUTERA PROJEK ATAS PRESTASI KERJA SEMASA PENYEBUTHARGA**

(Borang ini hendaklah dilengkapkan oleh Jurutera Projek atau Pembantu Kanannya yang mengawasi projek apabila diminta berbuat demikian oleh Pegawai Penilaian dan hendaklah dihantar segera dengan menggunakan mesin Fax/Email)

Kepada: Pengarah.....  
.....  
.....  
(u/p:.....)

Nama Kontraktor: .....  
Nama Projek Yang Dilaksanakan .....  
.....

No. Kontrak :

Harga Kontrak (termasuk anggaran nilai kerja perubahan) : RM .....  
Wang Kos Prima dan Peruntukan Sementara : RM .....  
Nilai Kerja Pembina : RM .....

Tarikh Milik Tapak : ..... Tempoh Kontrak: ..... minggu  
Tarikh Penyiapan Asal : .....

Lanjutan Masa Yang Telah Diluluskan : ..... hari

Lanjutan Masa Seterusnya:  
Yang difikir/ dijangka layak diperakukan : ..... hari  
Atas Sebab-sebab : (i) .....  
(ii) .....

Kemajuan Kerja (berdasarkan nilai kerja yang telah dilaksanakan):  
Pencapaian sebenar: ..... % Mengikut Jadual: ..... %  
Tarikh Kerja dijangka akan dapat disiapkan: .....

Nilai Bahagian Kerja Yang Telah Siap : RM .....  
Nilai Baki Kerja Yang Belum Siap : RM .....

Ulasan-ulasan mengenai Prestasi Kontraktor:  
(Nyatakan apa-apa kepujian dan/ atau kelemahan kontraktor dan juga apa-apa tindakan/ perakuan yang diambil/ dipertimbang berhubung dengan prestasi Kontraktor melaksanakan Kontrak)

Tandatangan Pegawai Penguasa/  
Jurutera Projek/ Wakilnya : .....

Nama : .....  
Jawatan : .....

Tarikh: .....

**SENARAI SUB-KONTRAKTOR  
PAKAR - BORANG H**

**BORANG H**

**SENARAI SUB KONTRAKTOR UNTUK KERJA PAKAR  
(PEMBUAT / PEMBEKAL)**

SUB KONTRAKTOR DAN PEMBEKAL YANG DINIATKAN UNTUK KONTAK INI			
Penyebutharga hendaklah menyenaraikan nama-nama sub-kontraktor yang dicadangkan.			
No.	Bidang Kerja dan Maklumat Am Kontraktor Pakar	Pendaftaran Dengan CIDB (Gred / Kategori / Pengkhususan)	Pendaftaran Dengan Lain-Lain Jabatan Berkaitan / MOF
<b>1</b>	<b>Skop Pembekalan</b> a) Jenis Skop : b) Nama Pembekal : c) Alamat Pembekal :		
<b>2</b>	<b>Pembuat Pakar</b> a) Jenis Skop Kerja : b) Nama Pembuat : c) Alamat Pembuat :		
<b>3</b>	d) Profit Produk : e) Profit Projek Dilaksanakan : f) Sample : (wajib dikemukakan bersama dengan dokumen sebutharga)		
<b>3</b>	Pengesahan daripada sub-kontraktor pakar.  Kami dengan ini mengesahkan bahawa penyebutharga telah mendapat maklumat kos dan kaedah pembinaan produk kami dan kami bersetuju untuk melaksanakan kerja ini untuk pihak Kerajaan.  _____ (Tandatangan)  Nama : No. KP : Jawatan : Tarikh :		
		Cop Syarikat :	

Nota :

- 1 Sekiranya kontraktor gagal mengemukakan pengesahan daripada pembekal / pembuat pakar. Sebutharga kontraktor boleh tidak dipertimbangkan oleh Jawatankuasa berkaitan
- 2 Sekiranya sub-kontraktor pakar gagal untuk meyakinkan pihak Kerajaan tentang kualiti daya tahan dan pematuhan kepada syarat yang ditetapkan, kontraktor hendaklah bersetuju untuk menggunakan produk dan perkhidmatan sub-kontraktor pakar yang lain dengan tiada tambahan kos kepada kontrak

LIST OF SPECIALIST SUB-CONTRACTORS TO BE ENGAGED IN THIS PROJECT

NAME AND ADDRESS OF SUB- CONTRACTORS	REGISTRATION WITH CIDB / MOF (Submit copies of relevant registration)	TYPE OF WORK UNDERTAKEN	YEARS OF EXPERIENCE

# LUKISAN