



JABATAN KERJA RAYA MALAYSIA
Cawangan Kontrak Dan Ukur Bahan
Ibu Pejabat JKR Malaysia
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Ruj. Kami : (23) JKR:UB (BPD1)061.110/15
Tarikh : 10 April 2017

Semua Ketua Bahagian, Cawangan Kontrak dan Ukur Bahan

Semua Ketua Unit Ukur Bahan, Cawangan Ibu Pejabat JKR

Semua Ketua Unit Ukur Bahan, JKR Negeri

Semua Ketua Unit Ukur Bahan, Unit Khas

**SENARAI KUANTITI BAGI KERJA AWALAN DAN PANDUAN TATACARA
PEMBAYARAN UNTUK ITEM KERJA AWALAN DALAM SENARAI KUANTITI
BAGI KERJA BANGUNAN**

1.0 TUJUAN

Surat ini bertujuan untuk memaklumkan mengenai penambahbaikan yang telah dibuat ke atas senarai kuantiti bagi kerja awalan dan untuk memperkemaskan tatacara membuat bayaran kepada kontraktor untuk item kerja awalan bagi kerja bangunan.

2.0 LATAR BELAKANG

2.1 Pada pertengahan tahun 2015, pihak Jabatan Audit Negara telah membentangkan hasil Laporan Ketua Audit Negara Tahun 2014 Siri 3 kepada pihak Kementerian Kerja Raya. Salah satu teguran audit adalah berhubung dengan beberapa kaedah pembayaran bagi item



CERTIFIED TO ISO 9001:2008
CERT. NO.: AR 4001



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kerja awalan yang tidak teratur dan seragam. Susulan itu, pihak Audit telah mengesyorkan supaya satu norma ditetapkan bagi menyeragamkan cara pembayaran untuk kerja-kerja awalan.

2.2 Sejajar dengan pengesyoran pihak Audit, beberapa tindakan seperti berikut perlu diambil:

- a) Menambahbaik semula Senarai Kuantiti bagi kerja awalan bagi kerja bangunan.
- b) Menyediakan satu panduan bagi memperkemaskan tatacara membuat bayaran untuk item kerja awalan dalam senarai kuantiti bagi kerja bangunan.

3.0 PEMAKAIAN

3.1 Senarai Kuantiti Bagi Kerja Awalan

Senarai Kuantiti bagi kerja awalan yang telah ditambahbaik adalah seperti di **Lampiran 1** dan hendaklah diambilkira dan dimasukkan dalam dokumen tender.

3.2 Panduan Tatacara Pembayaran Bagi Item Kerja Awalan

- a) Panduan tatacara pembayaran bagi item kerja awalan dalam Senarai Kuantiti ini adalah untuk dijadikan rujukan semasa membuat pembayaran kepada kontraktor bagi projek bangunan yang dilaksanakan dalam keadaan bekerja yang biasa atau dalam waktu kerja biasa (normal working hours). Sila rujuk **Lampiran 2**.

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- b) Panduan ini tidak meliputi projek bangunan yang dilaksanakan dalam keadaan bekerja yang luar dari kebiasaan (*abnormal working conditions*) seperti projek berjangka masa pendek, projek melibatkan kerja lebih masa, projek yang dilaksanakan dalam keadaan kerja dua puluh empat (24) jam, projek berisiko tinggi, projek canggih, projek keselamatan tinggi yang waktu kerjanya terhad atau ditetapkan dsbnya. Dalam hal ini, tatacara pembayaran bolehlah disesuaikan dengan keadaan sesuatu projek tersebut.

4.0 Sehubungan dengan itu, sila ambil segala langkah yang diperlukan selaras dengan surat ini bagi memastikan teguran audit tidak berulang pada masa hadapan.

Sekian, terima kasih.

'BERKHIDMAT UNTUK NEGARA'



 **Sr RATNA BINTI HJ. MAHYUDDIN)**

Pengarah Kanan

- s.k
- Ketua Setiausaha Kementerian Kerja Raya
(u.p; Bahagian Kewangan)
 - Ketua Pengarah Kerja Raya
 - Timbalan Ketua Pengarah Kerja Raya (Sektor Infra)
 - Timbalan Ketua Pengarah Kerja Raya (Sektor Bangunan)
 - Timbalan Ketua Pengarah Kerja Raya (Sektor Pakar)
 - Pengarah Cawangan Dasar dan Korporat

LAMPIRAN 1

**SENARAI KUANTITI BAGI
KERJA AWALAN**

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION
A	GENERAL INFORMATION TO BILL OF QUANTITIES
1.0	GENERAL
1.1	The Works contained in the Contract shall include the provision of all labour, materials, constructional plant, temporary or permanent works as required in the Contract.
1.2	The Bill of Quantities shall be read in conjunction with the Conditions of Contract, the Specification and the Drawings in the Contract Documents.
1.3	The items as set out in the Bill of Quantities shall apply to the whole of the Works contained in the Contract and the Contractor shall allow for compliance with the same and for any cost incurred in connection therewith.
1.4	Headings are not comprehensive and do not necessarily reflect or modify the meaning of the items in the B.Q. The exact nature and extent of the work to be carried out shall be ascertained by reference to the Contract as a whole, in particular the Conditions of Contract, the Specification and the Drawings. It shall be read together with the relevant "Method of Payment".
1.5	The amounts inserted by the Contractor for such items shall be deemed to apply to the whole of the Works carried out under this Contract.
1.6	Each item shall be individually priced. Bulk pricing for sections, trades, groups or pages of items shall not be allowed and no subsequent claims for loss or expense and/or profit shall be entertained for failure to comply with this clause.
1.7	The rates and prices inserted in the Bill of Quantities shall include cost of the works described, all risks, liabilities and obligations set forth or implied in the Contract Document and shall be deemed to include the following, unless expressly stated otherwise: (a) the provision of labour and all costs in connection therewith; (b) the supply of materials, goods, equipment and storage thereof including delivery to site and all costs in connection therewith; (c) taking delivery of materials, goods and equipment necessary for the Works and including those supplied by others, loading and unloading, storage and all costs in connection therewith; (d) the usage of plants and machineries and all costs in connection therewith; (e) the fixing, erecting and installing or placing in position of materials, goods and equipment including around obstruction, tolerances, penetration, working space, over-breaks etc. and all costs in connection therewith; (f) the provision of all temporary works and all costs in connection therewith unless separately provided for in the Bill of Quantities;
	A1/1

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION
	(g) the phasing requirements of the Works including the effect on the programming of the Works of all traffic and drainage diversions, special structural requirements, earthwork restrictions, alterations to services and street lighting (executed under the Contract or in conjunction with it) and all other requirements of the Contract and all costs in connection therewith; (h) all cost of testing to show proof of compliance with the Specification on materials and workmanship inclusive of samples of materials and submission of tests results. Should the frequency of testing and sampling not specified, then it shall be in accordance with the relevant Malaysian/British Standards and Codes of Practice. Where there is no such relevant Standards and Codes of Practice for reference, it shall then be as instructed by the S.O.; (i) all royalties and dues which the Contractor may be required to pay; (j) wastage; (k) establishment charges, overheads and profit; (l) whatsoever method of construction the Contractor may adopt.
1.8	Where any priced item in the B.Q. but has not been executed on site by the Contractor, the cost of such priced item shall accordingly be deducted from the Contract Sum.
1.9	All items priced shall be deemed to include compliance with the provisions of the contract, statutes, regulation, by-laws or any order or directive issued by public authority or public service company and other related legislation currently in force.
1.10	Notwithstanding the above clauses, the S.O. reserves the right to request from the Contractor the detailed breakdown of the pricing for items or rates in the B.Q. for his perusal. The detailed breakdown pricing may be used as a basis for the administration of the Contract
2.0	MEASUREMENT
2.1	Quantities in the Bills of Quantities are measured in accordance with the Malaysian Standard Method of Measurement of Building Works (2nd Edition Metric 2000). Where departure have been made from the standards mentioned, the method adopted in the Bills shall be adhered to for the purposes of ascertaining the value of all variations and measurements.
3.0	UNPRICED ITEMS
3.1	Where any item is left unpriced, it shall be deemed that the cost of such item has been allowed for elsewhere within this document. No subsequent claims arising out of expense and/or loss incurred against such unpriced item shall be entertained.
	A1/2

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION
4.0	GENERAL ATTENDANCE FOR NOMINATED SUB-CONTRACTORS AND NOMINATED SUPPLIERS
4.1	Attendance and facilities for Nominated Sub-contractors and nominated suppliers shall include: (a) in the case of works or services executed : for allowing the use of existing working space, access, temporary roads, erected scaffolding, sanitary, welfare and other facilities existing on Site and the provision of protection, water, electricity for lighting and clearing away rubbish and debris arising from the work; (b) in the case of goods, materials or services supplied: for taking delivery, unloading, storing, protection and returning crates, cartons and packing materials, all as specified in the specification
5.0	PHASING SEQUENCE OF OPERATIONS AND METHODS OF CONSTRUCTION
5.1	The rates and prices shall, unless otherwise stated, include for the costs of compliance with any restrictions imposed on the programming of the Works by the Government and Local Authorities and other relevant authorities dealing with phasing sequence of operations, method of construction, safety and health and liaison and access.
6.0	TRIALS, SAMPLES, TESTS AND INSPECTION
6.1	The rates and prices shall include for a testing laboratory or an accredited laboratory approved by SIRIM, equipment and staff for carrying out the tests, tests and the effects on the progress of the Works for the carrying out of all trials, sampling and tests whether specified in the Contract Document or otherwise in order to ensure compliance with the requirements of the Specification except where separately itemised in the Bill of Quantities.
7.0	EXISTING SERVICES AND MAINS
7.1	The Contractor shall include in his rates and prices for taking measures to locate the actual position and provide support and full protection of existing services and mains and other equipment and machineries during the progress of the Works. The Contractor shall inform the S.O. of all arrangements with all Statutory and Public Utility Authorities.
8.0	WORK UNDER WATER
8.1	The rates shall include any costs arising from and in connection with the execution of work under water wherever required unless otherwise stated.
	A1/3

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION																																												
9.0	PHRASEOLOGY																																												
9.1	Differences in the method of billing and in phraseology used in various parts of the Bill of Quantities and/or Schedule of Rates shall not be a basis of any claim for an increase in the rates and prices.																																												
10.0	PROVISIONAL SUMS																																												
10.1	All provisional sums included in the Bill of Quantities are intended to be approximate indications only of the amounts to be expended in respect of the work described and may be omitted entirely or substantially varied without entitling the Contractor to any claim for compensation. No part of the Contractor’s overhead, expenses or profit should be included in these sums when the bill is priced unless items for profit and attendance are specifically allowed for.																																												
11.0	CURRENCY OF PAYMENT																																												
11.1	Pricing of the Contract shall be in Malaysian Ringgit to two decimal place. Payment to the Contractor under the Contract shall be in Malaysian Ringgit.																																												
12.0	TEMPORARY DIVERSIONS																																												
12.1	Work in connection with the temporary diversion and relocation of existing overhead and underground services, whether detailed in the Contract or not shall be covered by the appropriate Lump Sum Items in Bill No. 1 : Preliminaries and General Conditions unless separately measured in other parts of the Bill of Quantities.																																												
13.0	ABBREVIATIONS																																												
13.1	The following abbreviations or symbols are generally used in the Contract Document and shall be read as follows: <table><tr><td>a)</td><td>mm</td><td>:</td><td>millimetre</td></tr><tr><td>b)</td><td>m</td><td>:</td><td>metre</td></tr><tr><td>c)</td><td>m2</td><td>:</td><td>square metre</td></tr><tr><td>d)</td><td>m3</td><td>:</td><td>cubic metre</td></tr><tr><td>e)</td><td>kg</td><td>:</td><td>kilogramme</td></tr><tr><td>f)</td><td>tonne</td><td>:</td><td>metric ton</td></tr><tr><td>g)</td><td>No.</td><td>:</td><td>Number</td></tr><tr><td>h)</td><td>L.S.</td><td>:</td><td>Lump Sum</td></tr><tr><td>i)</td><td>P.C. Sum</td><td>:</td><td>Prime Cost Sum</td></tr><tr><td>j)</td><td>P.S.</td><td>:</td><td>Provisional Sum</td></tr><tr><td>k)</td><td>RM</td><td>:</td><td>Ringgit Malaysia</td></tr></table>	a)	mm	:	millimetre	b)	m	:	metre	c)	m2	:	square metre	d)	m3	:	cubic metre	e)	kg	:	kilogramme	f)	tonne	:	metric ton	g)	No.	:	Number	h)	L.S.	:	Lump Sum	i)	P.C. Sum	:	Prime Cost Sum	j)	P.S.	:	Provisional Sum	k)	RM	:	Ringgit Malaysia
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k)	RM	:	Ringgit Malaysia																																										
	A1/4																																												

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION
14.0	SCOPE OF WORKS
14.1	The works included under this Contract comprises : a) Building Works i) ii) ii) b) External Works i) ii) ii) c) P.C. Sum and P.S. d) All Ancillary Works
15.0	LOCATION OF SITE
15.1	The site for the proposed Works is located at as shown on Drawing No.....
	A1/5

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	AMOUNT (RM)
	Project Signboard	
A	The Contractor shall provide, erect, and maintain a project signboard as specified.	
	Site Survey and Setting Out	
B	The Contractor shall employ a licensed surveyor to carry out site surveys before commencement and setting out of the Works.	
	Temporary Diversion And Relocation Of Existing Overhead And Underground Services	
C	The Contractor shall enquire from the various authorities and make arrangements for the disconnection, removal, relocation and reconnection of services and pay all necessary cost and fees in connection therewith and make good all damage as specified.	
	Construction Plan	
D	The Contractor shall submit to the S.O. for his approval the following as specified : a) Programme of Works b) Method statements c) Contractor's organisation chart d) Schedules e) Quality Assurance Plan for Works Contract worth RM10 Million and above i) Provide a quality Assurance Team full time on Site for the institution, administration and maintenance of the Quality Assurance Plan and the preparation and submission of all Quality Assurance Reports as specified, throughout the duration of the contract. ii) The Contractor shall appoint a suitably qualified and experienced person to act solely as a Quality Assurance Officer full time on site to lead Quality Assurance Team. (Refer Addendum to specification for project worth RM 10 Million and above).	
	Contractor's Plant	
E	The Contractor shall provide, erect, keep insured, maintain and remove on completion all requisite scaffolding, hoist, crane, construction plant, ladder, staging, tarpaulins, et cetera (excluding piling and pile testing equipment), as necessary for the execution of the Works.	
	Temporary Water And Power Supplies For The Works	
F	The Contractor shall provide adequate power and water supplies for the execution of the works including paying all associated costs and fees as specified.	
	A1/6	TOTAL AMOUNT (RM)

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	AMOUNT (RM)
	Site Security	
A	The Contractor shall provide all necessary personnel and lighting for the security of the site at all times until completion of the whole Works as specified.	
	Temporary Access And Maintenance Of Existing Roads	
B	The Contractor shall provide and maintain all necessary temporary roads, culverts, tracks, bridges, et cetera for access to and within the Site as specified.	
C	The Contractor shall maintain all access including existing roads, bridges, drains, culverts, roadside furniture, and all other appurtenances and services on such roads throughout the construction period. The Contractor shall make good any above mentioned item damaged by any work carried out by him.	
D	The Contractor shall locate the actual position and provide support and full protection of existing services and mains during the progress of the Works. The Contractor shall inform the S.O. of all arrangements with the various authorities.	
	Control Of Workmen, Plant And Machinery At Site	
E	The Contractor shall ensure the safety, health and welfare at work of all his workmen as specified.	
	Contractor's Temporary Accommodation And Facilities For Workmen Living On Site	
F	The Contractor shall provide and maintain all temporary accommodation and facilities including temporary lighting, plumbing, water storage, sanitary and sewerage for his labour and staff living on Site as specified.	
	Contractor's Office And Storage	
G	The Contractor shall provide and maintain Contractor's office and storage on the Site in positions as approved by the S.O. and as specified.	
	Care And Protection Of Materials And Works	
H	The Contractor shall provide and maintain everything necessary for proper protection of materials and Works from any damage by weather.	
	Shop Drawings, Samples And Mock-ups	
J	The Contractor shall submit relevant shop drawings, samples of materials or workmanship and mock-ups units as specified for the S.O.'s approval.	
	A1/7	TOTAL AMOUNT (RM)

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	AMOUNT (RM)
	Progress Photographs A The Contractor shall take progress photographs and submit to the S.O. as specified. Material Testing Laboratory And Staff B The Contractor shall provide/erect a testing laboratory within the site or rent a premise or propose an accredited laboratory approved by SIRIM as specified. The Laboratory shall be equipped with the necessary equipment and staff required to carry out the tests as identified in APPENDIX A/4 (List of Laboratory Equipment). Office Accommodation For S.O. C The Contractor shall provide and maintain a site office or relocatable site office or rent a premise for the use of the JKR supervisory staff which shall meet the requirement of the JKR design as specified. Telephone For S.O. D The Contractor shall provide a permanent telephone at the S.O.'s site office for the sole use of the S.O. and his representatives as specified. Survey Instruments And Personnel E The Contractor shall provide all such instruments, equipment and survey personnel as specified throughout the duration of the original Contract Period until 6 months after the issuance of the Certificate of Practical completion as per SO required. Site Items For S.O./Office Equipment And Facilities F The Contractor shall provide all Personal Protective Equipment required for the use of the S.O. and his supervisory staff complete as specified and complying with DOSH requirements. G The Contractor shall provide suitable types of fire extinguishers as specified. H The Contractor shall provide the equipment and facilities as listed as specified in APPENDIX A/2 for the use of the S.O., his representatives and staff throughout the duration of the original Contract Period. J The Contractor shall provide suitable transportation service by means of vehicle(s) including licensed and competent driver(s) as specified in APPENDIX A/3 throughout the duration of the original Contract Period.	
	A1/8	TOTAL AMOUNT (RM)

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	AMOUNT (RM)
	Safe Working Area	
A	The Contractor shall supply, erect, maintain and remove on completion of the Works, scaffolding and working platform with safety nettings, catch platforms, safety barricades, fencing, railing, screen wire netting and toe board, guardrails or board fences and sufficient illuminations, all as specified.	
B	The Contractor shall supply, erect, maintain and remove on completion of the Works, adequate, protective and security hoarding, scaffolding and working platform with safety nettings and such other safety measures necessary to ensure the safety of the workers, personnel, public and others at or within the vicinity of the Site, all as specified.	
	Safety, Health And Welfare	
C	The Contractor shall ensure the safety, health and welfare at work site as specified including but not limited to : a) Provision of First Aid Kit b) Pest control including keeping the site clean and dry to prevent breeding of mosquitoes, rodents, insects and vermin of any kind. c) Fogging at regular intervals	
D	*The Contractor shall employ a Safety and Health Officer (SHO) registered with DOSH for the entire contract period to be stationed fulltime at the site (for works exceeding RM 20 million contract value. <i>* Delete if not applicable</i>	
E	The Contractor shall employ a Site Safety Supervisor (SSS) registered with DOSH to be stationed a minimum of 15 hours a week at the site for the entire duration of the construction period.	
F	The Contractor shall submit 5 copies of Safety and Health Plan (S-Plan) as required in APPENDIX A/5 as specified.	
G	The Contractor shall submit 5 copies of monthly Safety and Health Report as required in APPENDIX A/6 as specified.	
H	The Contractor shall provide and maintain adequate traffic safety and control including signages, warning lights and flagmen as necessary.	
	Keeping The Site Tidy	
J	The Contractor shall make every effort to keep the Site in a reasonably clean and tidy condition for the duration of the Works as specified.	
	Total	
	A1/9	TOTAL AMOUNT (RM)

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	AMOUNT (RM)						
	Coordination Of Mechanical And Electrical (M & E) Services A The Contractor shall be responsible for coordinating the implementation of all M & E works as specified and appoint M&E Services Coordinator based on project cost as follows : <table><tr><td>Project Cost (RM)</td><td>Minimum Requirement Of M & E Coordinator</td></tr><tr><td>between 10 to 50 million</td><td>1 Engineer & 1 CoW</td></tr><tr><td>more than 50 million</td><td>1 Engineer & 2 CoW</td></tr></table> As-built Drawings B The Contractor shall provide four (4) sets of the approved As-built drawings after completion of each section of the Works in the form as specified. Clearing, Cleaning And Making Good On Completion C The Contractor shall clear and clean the Works including existing roads, drains bounding the Site of any debris, earth, et cetera, and make good all damages upon completion as specified. Form of Contract D The Contractor shall refer to the Standard Form of Contract for further information. The Contractor may price here for all the expenses involved in complying with the terms of these Clauses, otherwise such expenses are deemed to be included elsewhere. <u>Clause No. 13</u> Performance Bond E For due observance and performance of this contract the Contractor shall have to provide: Performance Bond in the form of an approved Bank or Insurance Guarantee equal to five percent (5%) of the contract sum to be deposited with the Government as a condition precedent to the commencement of any work under this contract. <u>Clause No.15</u> F Insurance Against Personal Injuries And Damage To Property <u>Clause No.16</u> G Indemnities to Government in Respect of Claim by Workmen <u>Clause No.17</u> H Employees' Social Security Act, 1969 <u>Clause No.18</u> J Insurance of Works.	Project Cost (RM)	Minimum Requirement Of M & E Coordinator	between 10 to 50 million	1 Engineer & 1 CoW	more than 50 million	1 Engineer & 2 CoW	
Project Cost (RM)	Minimum Requirement Of M & E Coordinator							
between 10 to 50 million	1 Engineer & 1 CoW							
more than 50 million	1 Engineer & 2 CoW							
	A1/10	TOTAL AMOUNT (RM)						

PART A1 – PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	AMOUNT (RM)
	Form of Contract (cont'd) <u>Clause No.22</u> A Design, Sub-clause No. 22.2 - Design Guarantee Bond <u>Clause No.35</u> B Materials, Goods And Workmanship - Opening up of work for inspection or testing of materials or goods <u>Clause No. 59 - Site Agent And Assistants</u> C The Contractor shall keep constantly on the Site for the full duration of the Contract a competent, efficient, suitably qualified, experienced and good character Site Agent and his assistants in each trade as may be necessary, who must be capable of receiving instructions in Bahasa Malaysia, and in default it shall be the responsibility of the Contractor to provide replacement for them and all wages and other expenses in connection with the employment of such replacement site agent and assistants. Any directions, explanations or instructions given to such site agent by the S.O. shall be deemed to have been given to the Contractor under this contract. provide all necessary superintending order	
	A1/11	TOTAL AMOUNT (RM)

LIST OF ESTIMATED QUANTITY FOR S.O'S PERSONAL PROTECTIVE EQUIPMENT (PPE)

No.	Items	Cost of Projects			
		< RM 5 Mil	RM 5 Mil - RM 20 Mil	> RM 20 mil. – RM50 mil.	> RM 50 mil.
1.	Safety Boots	5 pairs	10 pairs	15 pairs	20 pairs
2.	Safety Helmets	5 pcs	10 pcs	15 pcs	20 pcs
3.	Full Body Harness (for working at height) If required	If required	If required	If required	If required
4.	Protective gloves	If required	If required	If required	If required
5.	Safety Goggles	If required	If required	If required	If required
6.	Safety Jackets of reflective type	If required	If required	If required	If required
7.	Ear plugs and muffs	If required	If required	If required	If required
8.	Dust masks	If required	If required	If required	If required
9.	Head lamp	If required	If required	If required	If required
10.	 (insert other item if required)				

* The Contractor shall provide necessary space/ furniture for storage

LIST OF S.O.'S FACILITIES AND EQUIPMENT

LIST OF S.O.'S TRANSPORT SERVICES

LIST OF LABORATORY EQUIPMENT

REQUIREMENTS OF SAFETY AND HEALTH PLAN (S-PLAN)

1. Project Introduction and Scope of Works associated with OSH;
2. Contractor's Authorised and Updated OSH Policy;
3. Contractor's Organisation Chart and Safety And Health Committee (SHC) Chart which shall describing the staff involved including list of duties and responsibilities;
4. Communication, Consultation and Involvement of each member of the Contractor's project team as shown in the Item (c), including their relationship, interfacing and cooperation of workmen for successful implementation of the project. The planning shall taking account control of any OSH related complaints, advice, OSH programmes and awareness, SHC meeting's schedule, and solving OSH related issues;
5. Contractor's Authorised Updated Compliance List on OSH Legislation and Other Related Requirements;
6. List of Prohibited foods and drinks including drugs and medicines;
7. List of Personal Protective Equipment at Works;
8. Schedule of OSH Trainings and Programmes to all workmen including sub-Contractor;
9. Emergency Response Plan;
10. Safe Work System on Temporary Electricity Installation Works;
11. Safe Operational Procedures;
12. Format of Incident investigation report;
13. Format of Daily Reporting on Incident Statistic;
14. Chemical Safety Data Sheets or Material Safety Data Sheets;
15. Health Precaution on workmen: Medical Report (Health Surveillance), noise prevention;
16. Sanitation for workmen;
17. Safety Signage and Traffic Control;
18. Hazard Identification, Risk Assessment and Risk Control (HIRARC);

REQUIREMENTS OF SAFETY AND HEALTH REPORT

1. Related OSH programme;
2. Incident statistic from daily notification of any accidents, near misses, lost time injuries, death and ill-health with actions taken; in accordance with OSH (Notification of Accident, Dangerous Occurrence, Occupational Poisoning and Occupational Disease) Regulations 2004. The Contractor shall be held solely responsible for all incidents arising from any negligence in this respect;
3. Related OSH issues on complaints, Non-compliance, damages and actions taken;
4. Status on S-Plan and HIRARC;
5. List of workmen permit, CIDB Green Card, tools and machineries;
6. Traffic and other related safety control.

TABLE A2 : ENVIRONMENTAL QUALITY STANDARDS TO BE COMPLIED WITH BY THE CONTRACTOR

Aspects	Parameter	JKR EMS Set Target	Environment Quality (Sewage) Regulations, 2009		National Water Quality Standards (NWQS)	
			Standard A	Standard B	Class IIA	Class IIB
Soil	Soil loss	Minimum earthwork Phase construction ≤ 6 berms/benches for slopes (≤ 6m per berm) Reuse topsoil				
Water ^{1,2}	Turbidity	≤ 200 NTU	-	-	≤ 50 NTU	
	Suspended Solid	≤ 100 mg/l	≤ 50 mg/l	≤ 100 mg/l	≤ 50 mg/l	
	Biochemical Oxygen Demand ₅ @ 20°C (BOD) ₅	≤ 50 mg/l	≤ 20 mg/l	≤ 50 mg/l	≤ 3 mg/l	
	Chemical Oxygen Demand (COD)	≤ 100 mg/l	≤ 120 mg/l	≤ 200 mg/l	≤ 25 mg/l	
	pH	5.5 – 9	6 – 9	5.5 – 9	6-9	
	E-Coli	≤ 400 counts / 100 ml	-	-	≤100 counts/ 100ml	≤400 counts / 100 ml
	Dissolved Oxygen(DO)	≥ 4 mg/l	-	-	5-7 mg/l	
	Oil and Grease	≤ 10 mg/l	≤ 5 mg/l	≤ 10mg/l	≤ 40 µg /l, N	
	Ammoniacal Nitrogen (river)	-	≤ 10 mg/l	≤ 20mg/l	≤ 0.3 mg /l	
Air ³	Total Suspended Particulate (TSP) (24hr) Particulate Matter (PM10) (24hr)		≤260 µg/m ³ /day ≤150 µg/m ³ /day			
Noise ⁴	Equivalent Noise Level (L _{eq}), L ₁₀ , L ₉₀		Receiving Land Use (residential)			
			Day time (7.00 am – 7.00 pm) L ₉₀ ≤ 60 dBA; L ₁₀ ≤75 dBA; L _{max} ≤ 90 dBA;			
			Evening (7.00 pm – 10.00 pm) L ₉₀ ≤55 dBA; L ₁₀ ≤70 dBA; L _{max} ≤ 85 dBA;			
			Night time (10.00 pm – 7.00 am) Noise Sensitive Areas : L _{Aeq} ≤40 dBA			
			Suburban Areas : L _{Aeq} ≤ 45 dBA Urban Areas : L _{Aeq} ≤ 50 dBA			
Vibration ⁵	Vertical Vibration Peak Velocity (mm/s)		Not more than 3 mm/s at receiver location or across real property boundary.			

Reference:

- 2nd Schedule (Regulation 7), Environment Quality (Sewage) Regulations 2009, Environment Quality Act 1974.
 - Standard A: For location with downstream water intake
 - Standard B: For location with no downstream water intake
 - National Water Quality Standards for Malaysia
 - Class IIA: Water Supply II – conventional treatment required
 - Fishery II – sensitive aquatic species
 - Class IIB: Recreational use with body contact
 - Recommended Malaysian Guidelines on Ambient Air Quality
 - Schedule 1 & Schedule 6, Planning Guidelines for Environmental Noise Limits & Control, (DOE, 2004)
 - Planning Guidelines for Vibration Limits and Control of the Environment (DOE, 2004)
- Note: N - No visible floatable materials or debris or no objectionable odour, or no objectionable taste

LAMPIRAN 2

**PANDUAN TATACARA
PEMBAYARAN UNTUK ITEM
KERJA AWALAN**

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
A	Project Signboard The Contractor shall provide, erect and maintain a project signboard as specified *.	To be made as follows: • 60% on completion of installation • 20% for maintenance in proportion to the original Contract Period • 20% on removal
B	Site Survey and Setting Out The Contractor shall employ a licensed surveyor to carry out site surveys before commencement and setting out of the Works.	To be made upon completion of sections of the work.
C	Temporary Diversion And Relocation Of Existing Overhead And Underground Services The Contractor shall enquire from the various authorities and make arrangements for the disconnection, removal, relocation and reconnection of services and pay all necessary cost and fees in connection therewith and make good all damages as specified.	To be made as work is executed according to the requirement of the various authorities.

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
A	Construction Plan The Contractor shall submit to the S.O. for his approval the following as specified : a) Programme of Works b) Method statements c) Contractor's organisation chart d) Schedules e) Quality Assurance Plan for Works Contract worth RM10 Million and above i) Provide a quality Assurance Team full time on Site for the institution, administration and maintenance of the Quality Assurance Plan and the preparation and submission of all Quality Assurance Reports as specified, throughout the duration of the contract. ii) The Contractor shall appoint a suitably qualified and experienced person to act solely as a Quality Assurance Officer full time on site to lead Quality Assurance Team. (Refer Addendum to specification for project worth RM 10 Million and above).	To be made as follows: • Programme of Works – 50% upon submission and approval by SO of document and balance to be made in each interim payment in proportion to the original Contract Period. • Method statements – upon submission and approval by SO of document in proportion to the progress of the whole of the works • Contractors' organisation chart – upon submission and approval of document by SO • Schedules – upon submission and approval of document by SO in each interim payment in proportion to the original Contract Period • Quality Assurance Team & Quality Assurance Plan - in each interim payment in proportion to the original Contract Period subject to the submission and approval of document by SO and the provision of personnel • Quality Assurance Officer - in each interim payment in proportion to the original Contract Period subject to the provision of personnel
B	Contractor's Plant The Contractor shall provide, erect, keep insured, maintain and remove on completion all requisite scaffolding, hoist, crane, construction plant, ladder, staging, tarpaulins, et cetera (excluding piling and pile testing equipment), as necessary for the execution of the Works.	To be made as follows: • 50% according to the progress of the mobilisation of all construction plant and equipment brought and erected on site • 10% maintenance based on progress work • 40% on demobilisation

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
A	Temporary Water And Power Supplies For The Works	To be made as follows: • 30% initial cost upon provision of supplies • Balance in each interim payment in proportion to the original Contract Period.
	The Contractor shall provide adequate power and water supplies for the execution of the works including paying all associated costs and fees as specified.	
	Site Security	
	The Contractor shall provide all necessary personnel and lighting for the security of the site at all times until completion of the whole Works as specified.	
	Temporary Access And Maintenance Of Existing Roads	
C	The Contractor shall provide and maintain all necessary temporary roads, culverts, tracks, bridges, et cetera for access to and within the Site as specified.	To be made as follows: • 60% on completion of the temporary works • 40% for maintenance in proportion to the progress of the whole of the works
	The Contractor shall maintain all access including existing roads, bridges, drains, culverts, roadside furniture, and all other appurtenances and services on such roads throughout the construction period. The Contractor shall make good any above mentioned item damaged by any work carried out by him.	
D	Control Of Workmen, Plant And Machinery At Site	To be made in proportion to the progress of the whole of the works.
	The Contractor shall ensure the safety, health and welfare at work of all his workmen as specified.	
E		To be made in each interim payment in proportion to the original Contract Period.

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
A	Contractor's Temporary Accommodation And Facilities For Workmen Living On Site	
	The Contractor shall provide and maintain all temporary accommodation and facilities including temporary lighting, plumbing, water storage, sanitary and sewerage for his labour and staff living on Site as specified.	To be made as follows: • 50% on completion of the accommodation and facilities • 30% for maintenance in each interim payment in proportion to the original Contract Period • 20% on removal of the accommodation facilities
	Contractor's Office And Storage	
	The Contractor shall provide and maintain Contractor's office and storage on the Site in positions as approved by the S.O. and as specified.	To be made as follows: • 50% on completion of the office and storage • 30% for maintenance in each interim payment in proportion to the original Contract Period • 20% on removal of the office and storage
	Care and Protection of Materials and Works	
C	The Contractor shall provide and maintain everything necessary for proper protection of materials and Works from any damage by weather.	To be made in each interim payment in proportion to the original Contract Period.
D	Shop Drawings, Samples And Mock-ups	
	The Contractor shall submit relevant shop drawings, samples of materials or workmanship and mock-ups units as specified for the S.O.'s approval.	To be made progressively as and when work is properly executed.
E	Progress Photographs	
	The Contractor shall take progress photographs and submit to the S.O. as specified.	To be made in each interim payment in proportion to the original Contract Period.

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
A	Material Testing Laboratory And Staff The Contractor shall provide/erect a testing laboratory within the site or rent a premise or propose an accredited laboratory approved by SIRIM as specified. The Laboratory shall be equipped with the necessary equipment and staff required to carry out the tests as identified in APPENDIX A/4 (List of Laboratory Equipment).	To be made as follows: 1) If laboratory is provided/erected within site or rented: • 50% on the establishment or rental of facility and equipment as specified • 50% to be made for the following: - testing in proportion to the progress of the works on site - laboratory staff and maintenance in each interim payment in proportion to the original Contract Period. 2) If testing is carried out by an accredited laboratory, payment is to be made in proportion to the progress of works on site.
B	Office Accommodation For S.O. The Contractor shall provide and maintain a site office or relocatable site office or rent a premise for the use of the JKR supervisory staff which shall meet the requirement of the JKR site office design as specified.	To be made as follows: 1) If new/relocatable site office is provided/ erected: • 50% on completion of the site office • 30% for maintenance in each interim payment in proportion to the original Contract Period • 20% on removal 2) If a premise is rented: • 30% initial cost upon securing of premise • 50% for maintenance in each interim payment in proportion to the original Contract Period • 20% upon issuance of Certificate of Practical Completion

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
A	Telephone For S.O. The Contractor shall provide a permanent telephone at the S.O.'s site office for the sole use of the S.O. and his representatives as specified.	To be made as follows: • 20% initial cost on provision of the facility; • 80% for maintenance in each interim payment in proportion to the original Contract Period
B	Survey Instruments And Personnel The Contractor shall provide all such instruments, equipment and survey personnel as specified throughout the duration of the original Contract Period until 6 months after the issuance of the Certificate of Practical completion as per SO required.	To be made in each interim payment in proportion to the original Contract Period including 6 months after the issuance of the Certificate of Practical Completion, upon the supply of equipment and personnel and as long as the equipment and personnel are on site.
C	Site Items For S.O./Office Equipment And Facilities The Contractor shall provide all Personal Protective Equipment required for the use of the S.O. and his supervisory staff complete as specified and complying with DOSH requirements.	To be made as follows: • 70% on supply of equipment and facilities • 30% for maintenance of equipment and facilities in each interim payment in proportion to the original Contract Period
D	The Contractor shall provide suitable types of fire extinguishers as specified.	To be made as follows: • 80% on supply of the facilities • 20% for maintenance which shall be made in periodically in proportion to the original Contract Period
E	The Contractor shall provide the equipment and facilities as listed as specified in APPENDIX A/2 for the use of the S.O., his representatives and staff throughout the duration of the original Contract Period.	To be made as follows: • 70% on provision of the facilities • 30% for maintenance in each interim payment in proportion to the original Contract Period.

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
	Site Items For S.O./Office Equipment And Facilities (cont'd)	
A	The Contractor shall provide suitable transportation service by means of vehicle(s) including licensed and competent driver(s) as specified in APPENDIX A/3 throughout the duration of the original Contract Period.	To be made in each interim payment in proportion to the original Contract Period as as when service has been made.
	Safe Working Area	
B	The Contractor shall supply, erect, maintain and remove on completion of the Works, scaffolding and working platform with safety nettings, catch platforms, safety barricades, fencing, railing, screen wire netting and toe board, guardrails or board fences and sufficient illuminations, all as specified.	To be made upon erection and removal in proportion to the progress of the whole of the works.
C	The Contractor shall supply, erect, maintain and remove on completion of the Works, adequate, protective and security hoarding and such other safety measures necessary to ensure the safety of the workers, personnel, public and others at or within the vicinity of the Site, all as specified.	To be made as follows: • 50% on erection of stucture • 30% on maintenance in each interim payment in proportion to the original Contract Period • 20% on removal of structure
	Safety, Health And Welfare	
D	The Contractor shall ensure the safety, health and welfare at work site as specified including but not limited to : a) Provision of First Aid Kit b) Pest control including keeping the site clean and dry to prevent breeding of mosquitoes, rodents, insects and vermin of any kind. c) Fogging at regular intervals	To be made as follows: a) First Aid Kit – upon supply b) Pest Control – upon carrying out of periodical service in proportion to the original Contract Period c) Fogging – upon carrying out periodical service in proportion to the original Contract Period

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
	Safety, Health And Welfare (cont'd)	
A	*The Contractor shall employ a Safety and Health Officer (SHO) registered with DOSH for the entire contract period to be stationed fulltime at the site (*for works exceeding RM 20 million contract value.	To be made in each interim payment in proportion to the original Contract Period subject to being stationed full time. Unit of measurement to be as Lump Sum.
B	The Contractor shall employ a Site Safety Supervisor (SSS) registered with DOSH to be stationed a minimum of 15 hours a week at the site for the entire duration of the construction period.	To be made in each interim payment in proportion to the original Contract Period subject to being stationed a minimum of 15 hours per week. Unit of measurement to be as Lump Sum.
C	The Contractor shall submit 5 copies of Safety and Health Plan (S-Plan) as required in APPENDIX A/5 as specified.	To be made upon submission and reviewing of the documents. Unit of measurement to be as Lump Sum.
D	The Contractor shall submit 5 copies of monthly Safety and Health Report as required in APPENDIX A/6 as specified.	To be made in the respective interim payment upon submission of monthly reports. Unit of measurement to be as Lump Sum.
E	The Contractor shall provide and maintain adequate traffic safety and control including signages, warning lights and flagmen as necessary.	To be made in each interim payment in proportion to the original Contract Period subject to compliance with the specifications.
	Keeping The Site Tidy	
F	The Contractor shall make every effort to keep the Site in a reasonably clean and tidy condition for the duration of the Works as specified.	To be made in each interim payment in proportion to the original Contract Period.

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT						
A	Coordination Of Mechanical And Electrical (M & E) Services	To be made in proportion to the duration of the M&E works subject to the M&E services coordinator being full time on the M&E services.						
	The Contractor shall be responsible for coordinating the implementation of all M & E works as specified and appoint M&E Services Coordinator based on project cost as follows :							
	<table><tr><td>Project Cost (RM)</td><td>Minimum Requirement of M & E Coordinator</td></tr><tr><td>between 10 to 50 million</td><td>1 Engineer & 1 CoW</td></tr><tr><td>more than 50 million</td><td>1 Engineer & 2 CoW</td></tr></table>		Project Cost (RM)	Minimum Requirement of M & E Coordinator	between 10 to 50 million	1 Engineer & 1 CoW	more than 50 million	1 Engineer & 2 CoW
	Project Cost (RM)		Minimum Requirement of M & E Coordinator					
	between 10 to 50 million		1 Engineer & 1 CoW					
more than 50 million	1 Engineer & 2 CoW							
B	As-built Drawings The Contractor shall provide four (4) sets of the approved As-built drawings after completion of each section of the Works in the form as specified.	Provisional Sum item.						
	Clearing, Cleaning And Making Good On Completion							
C	The Contractor shall clear and clean the Works including existing roads, drains bounding the Site of any debris, earth, et cetera, and make good all damages upon completion as specified.	To be made in the last interim payment upon clearing up of site to the satisfaction of the S.O.						

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
	Form of Contract The Contractor shall refer to the Standard Form of Contract for further information. The Contractor may price here for all the expenses involved in complying with the terms of these Clauses, otherwise such expenses are deemed to be included elsewhere.	
A	<u>Clause 13</u> For due observance and performance of this contract the Contractor shall have to provide: Performance Bond in the form of an approved Bank or Insurance Guarantee equal to five percent (5%) of the contract sum to be deposited with the Government as a condition precedent to the commencement of any work under this contract.	To be made in full after verifying authenticity of the Bank /Insurance Guarantee and upon submission of receipt of the premium paid from the company / authorised agent. Note: This item is not applicable for Performance Guarantee Sum (<i>Wang Jaminan Pelaksanaan</i>).
B	<u>Clause 15</u> Insurance Against Personal Injuries And Damage To Property	To be made in full after receiving the insurance policy and upon submission of the receipt of the premium paid from the insurance company/ authorised agent.
C	<u>Clause 16</u> Indemnities to Government in Respect of Claim by Workmen	To be made in full after receiving the insurance policy and upon submission of the receipt of the premium paid from the insurance company/ authorised agent
D	<u>Clause 17</u> Employee's Social Security Act, 1969	To be made in each interim payment in proportion to the original Contract Period.
E	<u>Clause 18</u> Insurance of Works.	To be made in full after receiving the insurance policy and upon submission of the receipt of the premium paid from the insurance company / authorised agent.

METHOD OF PAYMENT FOR PRELIMINARIES AND GENERAL CONDITIONS

ITEM	DESCRIPTION	METHOD OF PAYMENT
	Form of Contract (cont'd)	
A	<u>Clause 22</u> Design, Sub-clause 22.2 - Design Guarantee Bond	To be made in full after verifying authenticity of the Bank/ or Insurance Guarantee and upon submission of receipt of the premium paid from the company/ authorised agent .
B	<u>Clause 35</u> Materials, goods and workmanship - Opening up of work for inspection or testing of materials or goods	Provisional Sum item
C	<u>Clause 59 - Site Agent And Assistants</u> The Contractor shall keep constantly on the Site for the full duration of the Contract a competent, efficient, suitably qualified, experienced and good character Site Agent and his assistants in each trade as may be necessary, who must be capable of receiving instructions in Bahasa Malaysia, and in default it shall be the responsibility of the Contractor to provide replacement for them and all wages and other expenses in connection with the employment of such replacement site agent and assistants. Any directions, explanations or instructions given to such site agent by the S.O. shall be deemed to have been given to the Contractor under this contract. provide all necessary superintending order	To be made in each interim payment in proportion to the original Contract Period subject to being available for the full duration of the Contract.