### Diamond Core Drilling for Geo-technical Investigation at Dam Axis Site of Sapta Kosi Multipurpose Project, near Barahakshetra, Dhankuta, Nepal

#### PACKAGE 'A'

TENDER NO.: 01/2023-24/JPO-SKSKI/BRT/NEPAL

#### December, 2023

PROJECT MANAGER,
JPO-SKSKI, HOUSE NO-96,
NEAR KUMARI RICE MILL,
TIN TOLIYA, SIDDHARTH MARG,
BIARATNAGAR -10, NEPAL

Ph: +977 21 416051, 416252 M:977 9852022979/9851168094 Email: jposkskibrt@gmail.com

#### **Important Notes: -**

- (i) THE TENDERER SHOULD SUBMIT THIS DOCUMENT IN ORIGINAL DULY SIGNED WITH FIRM'S STAMP ON EACH PAGE.
- (ii) THE TENDERER SHOULD READ ALL THE INSTRUCTIONS IN THE DOCUMENT THOROUGHLY BEFORE SUBMITING THE TENDER AND ADHERE TO THE DATES GIVEN.
- (iii) THE TENDERER SHOULD FILL UP THE CHECK LIST AND SUBMIT SITE ASSESSMENT CERTIFICATE WITH HIS TENDER.

Diamond Core Drilling for Geo-technical Investigation at Dam Axis Site of Sapta Kosi Multipurpose Project, near Barahakshetra, Dhankuta, Nepal

#### PACKAGE 'A'

Tender No.	01/2023-24/JPO-
	SKSKI/BRT/NEPAL
Estimated Cost	NRs. 292.645 Lakh (IRs.
	182.904 Lakh)
Earnest Money	NRs. 5.86 Lakh (IRs. 3.66
	Lakh)
Security Deposit	5% of tendered and
	accepted value of work
Performance Guarantee	5% of tendered and
	accepted value of work
Contract Period	300 days
Last Date of Receipt of Application	16.01.2024, 16:00 hrs.
for Issue of Tender	
Last Date of Issue of Tender	16.01.2024, 17:00 hrs.
Last Date & Time for Submission of	18.01.2024, 15:00 hrs.
Tender	10.01.202 1, 10.000 101
Date & Time of Opening of Tender	18.01.2024, 15:30 hrs.
Cost of Tender Document	NRs. 1600/- (IRs. 1000/-)

NAME OF WORK: Diamond Core Drilling for Geo-technical

Investigation at Dam Axis Site of Sapta Kosi Multipurpose Project, near Barahakshetra,

Dhankuta, Nepal

#### PACKAGE 'A'

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#### **CHECK LIST**

### Please tick the appropriate column.

SI.	DOCUMENT	ENCL	OSED
NO.		YES	NO
1.	Whether Covering Letter of Tenderer on his Letter Pad has been attached with the Tender.		
2.	Whether the Original Tender Document including Schedule of Quantities and Rates (Schedule–A) have been duly filled in and signed with Firm's stamp on each page.		
3.	Whether the Site Assessment Certificate by the Tenderer based on his visit to Project Site has been attached with the Tender.		
4.	Whether the List of Drilling Plant & Machinery available with Tenderer has been attached with the Tender.		
5.	Whether Unit Rates of Items have been quoted in both Figures and Words.		
6.	Whether Gross Amount of Tender Value has been quoted both in Figures and Words.		
7.	Whether quoted Unit Rates and Amounts are in Nepalese Rupees.		
8.	Whether work experience certificate as mentioned in Bid invitation has been enclosed		
9.	Whether certificate of annual turnover of last three year as mentioned in Bid invitation has been enclosed		

#### **INVITATION OF TENDER**

- 1.0 Item rate Tenders are invited by Project Manager, JPO-SKSKI, Biratnagar, Nepal on behalf of Nepal-India, Joint Project Office Sapta Kosi Sun Kosi Investigation (JPO-SKSKI) from eligible Contractors/Agencies from India and Nepal for the work of Diamond Core Drilling for 'Diamond Core Drilling for Geo-technical Investigation at Dam Axis Site of Sapta Kosi Multipurpose Project, near Barahakshetra, Dhankuta, Nepal.
- 2.0 The estimated cost of the work is NRs. 2,92,64,500/- (Nepali Rupees Two Crore Ninety Two Lakh Sixty Four Thousand and Five Hundred) Only equivalent to IRs. 1,82,90,400/- (Indian Rupees One Crore Eighty Two Lakh Ninety Thousand and Four Hundred) Only. This estimate, however, is given merely as a rough guide.
- **3.0 Agreement:** Agreement shall be drawn with the successful Tenderer on prescribed Form No. CPWD 7/8 (enclosed). Tenderer shall quote his rates as per various terms and conditions of the said form, which shall form part of the agreement.
- 4.0 Time of Completion: The time allowed for carrying out the works shall be 300 days (excluding the time required for conducting tests) from the date of issue of 'Letter of Intent' to commence the works or making available the Custom Exemption Certificate from Government of Nepal (Applicable for Indian Firms only), whichever is later.
- **5.0** Availability of Site: The site for the work is available.
- 6.0 Earnest Money: The tender shall be accompanied by earnest money of NRs. 5.86 Lakh (IRs. 3.66 Lakh) in the form of Demand Draft of a Scheduled Bank of Nepal / India issued in favour of Project Manager, Joint Project Office Sapta Kosi Sun Kosi Investigation, Biratnagar, Nepal payable at Biratnagar, Nepal.
- **7.0 Procedure for Submission of Tender:** Following procedure for submission of tender shall be strictly followed by the Tenderers:
  - 7.1 Earnest money through prescribed instrument should be placed in a sealed envelope (marked as Envelope-II) super-scribed as "Earnest Money Deposit". In case the Tender Document is downloaded from the website <a href="www.cwc.gov.in">www.cwc.gov.in</a> or <a href="www.doed.gov.np">www.doed.gov.np</a>, a separate Demand Draft for the cost of document should also be placed in the same envelop. Envelop in that case, should be super-scribed as "Cost of Document & Earnest Money Deposit".

- 7.2 Tenders, should always be placed in another sealed envelope (marked as Envelope-III) with the name of work and due date written on envelop. Tender document as issued by JPO-SKSKI, Biratnagar, Nepal duly filled up and signed by Tenderer on every page shall only be submitted.
- 7.3 Both the envelopes viz. Earnest Money envelope (Envelope-II) and tender envelope (Envelope-III) should be placed inside another sealed envelope (marked as Envelope-I) with the name of work & due date written on it.
- 7.4 The Envelope-III marked as "Tender" shall be opened only for those tenderers whose Earnest Money Deposit placed in the Envelop-II is found to be in order
- 7.5 The Tenderers should specifically note that they are not expected to stipulate any condition in their covering letter and further if any such condition is included in the covering letter, such tenders are liable to be out rightly rejected treating the same as a conditional tender.
- 7.6 It shall be ensured that the Check List given in Tender Document is duly and completely filled in and all necessary documents/ information prescribed therein are submitted with the Tender.
- **8.0 Visit to Work Site by Tenderers**: Tenderers are advised to visit and inspect the project site and examine the site and its surroundings and satisfy themselves, before submitting their Tenders, as to the nature of the ground and sub-soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to the risks, contingencies and other circumstances which may influence or affect their Tender & rates of various items.
- 9.0 A Tenderer shall be deemed to have full knowledge of the site, once he / she submits his / her Tender, whether he / she visits the site or not and no extra charges consequently on account of any misunderstanding or otherwise shall be allowed. The Tenderer shall be responsible for arranging and maintaining, at his own cost, all materials, tools & plants, water, electricity, access & approach paths, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the Tender documents.
- 10.0 Submission of a Tender by a Tenderer implies that he has read this notice and all other Tender documents and has made himself aware of the scope and specifications of the work to be carried out and of conditions and rates at which stores, tools and plants etc. (if any) will be issued to him by the Employer and local conditions and other factors having a bearing on the rates of various items and the execution of work. The Tenderer shall enclose his/her site assessment report on the above aspects with his / her Tender.

The Tenderers who wish to visit the proposed project site or have any query may contact the Project Manager, JPO-SKSKI, House No-96, Siddharth Marg, Near Kumari Rice Mill, Tin Toliya, Biratnagar-10, Nepal (Phone - +977-21-416051 &

416252, Mob. No. +977-9852022979/9851168094) during any working days up to 16.01.2024 except Saturday (Weekly Off) and JPO-SKSKI's holidays.

- 11.0 The Tender documents will be issued only to those firms from the Office of Project Manager, JPO-SKSKI, House No.96, Siddhartha Marg, Tin Toliya, Biratnagar-10, Nepal on all working days up to 17:00 hrs. (NST) from 24th December 2023 to 16th January, 2024 on payment of NRs.1,600/- (IRs.1000/-) in cash or through Demand Draft (in favour of Project Manager, JPO-SKSKI Payable at Biratnagar, Nepal), who fulfill eligibility conditions and furnish documentary evidence of their experience and turnover with copies of work orders and certificate of satisfactory execution of work. However, the issue of tender document does not mean that tenderer meets all the qualifying requirements and the same will be examined in detail after opening the tender during evaluation. In case, if any Tenderer is found to be not meeting the specified qualifying requirements, his/her Tender would be summarily rejected.
- 12.0 Application for Tender document will be accepted at the office of Project Manager, JPO-SKSKI by 16: 00 hrs (NST) upto 16<sup>th</sup> January, 2024. The Tender document can also be downloaded from the websites www.cwc.gov.in or www.doed.gov.np. In that case, the Demand Draft for the cost of document should be enclosed along with copies of Balance Sheet and Profit & Loss Account duly audited by Chartered Accountant for the last 3 year with duly filled Tender document at the time of submission, without which the document shall not be entertained.
- 13.0 Last Date of Submission and Opening of Tenders: Tenders, placed in sealed envelope, with the name of work and due date written on the envelops, will be received by the office of Project Manager, JPO-SKSKI Office, Biratnagar, Nepal up to 15:00 hrs on 18.01.2024 and will be opened by authorized representative of Project Manager, JPO-SKSKI, Biratnagar, Nepal on the same day at 15:30 Hrs in the presence of the Tenderers or their authorized representative, who wish to be present at the time of Tender opening.
- **14.0** Acceptance of Tender: The Project Manager, JPO-SKSKI, Biratnagar, Nepal does not bind himself to accept the lowest or any other Tender and reserves his right to reject any or all of the Tenders received without assigning any reason.
- **15.0** The Project Manager, JPO-SKSKI, Biratnagar, Nepal also reserves to himself the right of accepting the whole or any part of the Tender and the Tenderer shall be bound to perform the same at the quoted rates.
- **16.0** Tenders, in which any of the prescribed conditions are not fulfilled or are incomplete in any respect, are liable to be rejected.
- 17.0 Canvassing whether directly or indirectly, in connection with Tenders is strictly prohibited and the Tenders submitted by the Tenderer who resort to canvassing are liable to be rejected.

- 18.0 Validity Period of Tender: The Tender for the works shall remain open for acceptance for a period of 180 days (one hundred eighty days) from the prescribed date of opening of Tenders. In exceptional circumstances prior to expiry of the original Tender validity period, the Project Manager, JPO-SKSKI, Biratnagar may request the Tenderers to extend the period of validity for a specified additional period. The request and the responses thereto shall be made in writing. If any Tenderer withdraws his Tender before the said period or makes any modifications in the terms and conditions of the Tender which are not acceptable to the Project Manager, JPO-SKKKI, Biratnagar, Nepal then the Project Manger, JPO-SKSKI, Biratnagar, Nepal shall, without prejudice to any other right or remedy, be at liberty to forfeit the aforesaid earnest money.
- 19.0 Tender Price: Unless stated otherwise in the Tender document, the contract shall be for the whole works based on the unit rates to be quoted by the Tenderer and quantities specified in Tender document in Schedule-A entitled "Schedule of Quantities and Rates". The Tenderer shall fill in rates and prices for all items of the Work described in the "Schedule of Quantities and Rates". Unless otherwise provided for in the Tender document, the rates quoted by the Tenderer shall remain firm during the entire contract period and any extensions thereto.
- 20.0 Amendment of Tender Document: At any time prior to the deadline for submission of Tenders, the Project Manger, JPO-SKSKI, Biratnagar, Nepal may amend Tender documents by issuing addenda. Any addendum thus issued, shall be part of the Tender document and shall be communicated in writing by fax/ e-mail to all Tenderers who have purchased the Tender documents. To give perspective Tenderers, reasonable time for taking an addendum into account in preparing their Tenders, the Employer may extend, as felt necessary, the deadline for submission of Tenders. The same addendum shall also be uploaded in the websites.
- 21.0 Clarification of Tenders: During examination and evaluation of Tenders, the Project Manger, JPO-SKSKI, Biratnagar Nepal may at his discretion ask Tenderers for furnishing any clarification on their Tenders, including breakdown of unit rates. The request for clarifications and the response there to shall be in writing, but no change in the price or substance of the Tender shall be sought or offered or permitted except as required to confirm the correction of arithmetic errors discovered by the Project Manger, JPO-SKSKI, Biratnagar Nepal during the evaluation of the Tenders.
- **22.0 Examination of Tenders and Determination of Responsiveness**: Information relating to examination, clarification, evaluation and comparison of Tenders and recommendations for the award of a work shall not be disclosed to Tenderers or any other persons, not initially concerned with such process until the award of work to the successful Tenderer has been announced. Any effort by a Tenderer to influence the Project Manger, JPO-SKSKI, Biratnagar, Nepal in processing of Tenders or decision of award of work may result in the rejection of the Tenderer's Tender.

- 23.0 A substantially responsive Tender is one that conforms to all the terms and conditions and specifications of the Tender document without material deviation or reservation. A material deviation or reservation is one which affects in any substantial way the scope, quality, performance of the work or inconsistent with the Tender documents and which limits in any substantial way the Project Manger's right or the Tenderer's obligations under the contract, or who's rectification would affect unfairly the competitive position of other Tenderers presenting substantially responsive Tenders.
- 24.0 If a Tender is not substantially responsive, it will be rejected by the Project Manger, JPO-SKSKI, Biratnagar, Nepal and may not subsequently be made responsive by correction or withdrawal and the non-conforming deviations or reservations.
- **25.0** Consortium/ Joint venture/sub contract is not allowed.
- **26.0** Firms fulfilling the following eligibility conditions are eligible to bid for above work:
  - I. Firm should have proven experience of minimum **Five years** of Diamond Core Drilling works for Geotechnical Investigation of River Valley Projects in India/Nepal/Bhutan.
  - II. Firm should have executed at least three similar completed works costing not less than the amount equal to 40% (Forty Percent) of the estimated cost; or
  - Firm should have executed at least two similar completed works costing not less than the amount equal to 50% (Fifty Percent) of the estimated cost; or
  - IV. Firm should have executed at least one similar completed works costing not less than the amount equal to 80% (Eighty Percent) of the estimated cost.
  - V. Similar works means firms have done works of drilling in River Valley Projects in India/Nepal/Bhutan by Diamond Core drilling at least one drill hole of 200 m or more depth in River Valley Projects and at least 500 m or more during last five years.
  - **VI.** Firm shall have in its possession at least **three** 'Wire Line Drilling Machines' capable of drilling up to **250 m** depth in hilly terrain and drilling in river bed up to **200 m** depth.
  - VII. Firm's average annual turnover during last 3 years shall not be less than 80% of the estimated cost. The copies of Balance Sheet and Profit & Loss Account duly audited by Chartered Accountant shall be furnished at the time of purchase of Tender Document.
- **27.0** The Tender documents will be issued only to those firms who fulfill eligibility conditions and furnish documentary evidence of their experience and turnover

with copies of work orders and certificate of satisfactory execution of work. However, the issue of tender document does not mean that tenderer meets all the qualifying requirements and the same will be examined in detail after opening the tender during evaluation. In case, if any Tenderer is found to be not meeting the specified qualifying requirements, his/her Tender would be summarily rejected.

- 28.0 Tender documents will be issued from the Office of Project Manager, JPO-SKSKI, House No.96, Siddhartha Marg, Tin Toliya, Biratnagar-10, Nepal on all working days up to 17:00 hrs. (NST) from 24th December 2023 to 16th January, 2024 on payment of NRs.1,600/- (IRs.1000/-) in cash or through Demand Draft (in favour of Project Manager, JPO-SKSKI Payable at Biratnagar, Nepal). Application for Tender document will be accepted at the office of Project Manager, JPO-SKSKI by 16:00 hrs (NST) upto 16th January, 2024. The Tender document can also be downloaded from the websites www.cwc.gov.in or www.doed.gov.np. In that case, the Demand Draft for the cost of document should be enclosed along with copies of Balance Sheet and Profit & Loss Account duly audited by Chartered Accountant for the last 3 year with duly filled Tender document at the time of submission, without which the document shall not be entertained. Duly filled Tender document will be received in this office by 16th January, 2024 upto 15:00 hrs and will be opened on the same day at 15:30 hrs
- 29.0 Tenderer should submit an undertaking of having sufficient possession of Wire Line Drilling Machines, other accessories, manpower capable to execute the Diamond core drilling works desired under this tender. Make, model and Serial Number of each Wire Line Drilling Machines and other accessories should be provided along with undertaking.
- **30.0 Signing of Contract Agreement:** The successful Tenderer, on acceptance of his Tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work sign the contract agreement consisting of:
  - (a) The 'Invitation of Tender', all the Tender documents including 'General Conditions & Clauses of Contract', 'Additional Terms & Conditions', 'Special Terms & Conditions', 'Technical Specifications' and 'Drawings', if any, forming the Tender as issued at the time of invitation of Tender and acceptance thereof together with all correspondence leading thereto.
  - (b) Standard CPWD Form-7/8: Item Rate Tenders & Contract for Works.

Sd/-Project Manager, JPO-SKSKI, Biratnagar, Nepal

### CPWD FORM-7/8 Item Rate Tender & Contract for Works

- (A) Name of the Work: Tender for the work of 'Diamond Core Drilling for Geotechnical Investigation at Dam Axis Site of Sapta Kosi Multipurpose Project, near Barahakshetra, Dhankuta, Nepal.
  - (i) To be submitted by 15:00 hrs. (NST) on 18.01.2024 to the Project Manager, JPO-SKSKI, Biratnagar, Nepal.
  - (ii) To be opened in presence of Tenderer(s) who may wish to be present at 15:30 hrs. (NST) on 18.01.2024 in the office of Project Manager, JPO-SKSKI, Biratnagar, Nepal.

Issued to:
(Contractor)
Signature of officer issuing the documents
Destruction
Designation
Date of Issue

#### **TENDER**

I/We have read and examined the 'Notice Inviting Tender', Schedule 'A', 'B', 'C', 'D', 'E' & 'F', Technical Specifications, applicable Designs & Drawings, 'General Conditions & Clauses of Contract', 'Additional Conditions of Contract', 'Special Conditions of Contract', 'Schedule of Quantities & Rates' and other documents and Rules referred to in the conditions of Contract and all other contents in the Tender document for the above work.

I/We hereby tender for the execution of the work specified in this Tender documents by the Project Manager, JPO-SKSKI, Biratnagar, Nepal within the time specified in **Schedule 'F'** and in accordance in all respects with specifications, designs, drawings and instructions in writing referred to in Clause 8 of the 'General Conditions & Clauses of Contract' and with such materials as are provided for, by, and in respects in accordance with, such conditions so far as applicable.

We agree to keep the Tender open for **180 days** (one hundred eighty days) from the prescribed date of opening of Tender thereof and not to make any modifications in its terms and conditions.

A sum of NRs 5.86 Lakh/- (Nepalese Rupees Five Lakh Eighty-Six Thousand) only / IRs. 3.66 Lakh/- (Indian Rupees Three Lakh Sixty-Six Thousand only) has been deposited in the form of Demand Draft of a Schedule Bank of Nepal / India in favour of the Project Manager, JPO-SKSKI, Biratnagar, Nepal and payable at Biratnagar, Nepal as Earnest Money.

If I/We, fail to commence the work specified, I/we agree that the Project Manager, JPO-SKSKI, Biratnagar, Nepal or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely otherwise the said earnest money shall be returned to Tenderer by him after deposition of performance guarantee by Tenderer to execute all the works referred to in the Tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto maximum of the percentage mentioned in **Schedule 'F'** and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 8 of the **'General Conditions & Clauses of Contract'**.

I/We hereby declare that I/we shall treat the Tender documents, drawings and other records connected with the work as secret/confidential documents and shall not communicate any information derived there from to any person to whom I/we am/are not authorised to communicate the same or use the information in any manner prejudicial to the safety of the State.

I/We agree that should I/we fail to commence the work specified in the above memorandum, an amount equal to the amount of the earnest money mentioned in the form of 'Invitation of Tenders' shall be absolutely forfeited by the Project Manager, JPO-SKSKI, Biratnagar, Nepal and the same may at the option of the competent authority on behalf of the Project Manager, JPO-SKSKI be recovered, without prejudice to any other right or remedy available in law, out of the deposit in so far as the same may extend in terms of the said bond and in the event of deficiency out of any other money due to me/us under this contract or otherwise.

Dated:	Signature of Contractor	
Postal Address Witness:	Seal	
Address:		
Occupation:		

#### ACCEPTANCE

The above Tender (as modified by you as provided in the letters mentioned hereunde is accepted by me for and on behalf of the JPO-SKSKI for a sum of NRs		
(Nepalese Rupees	)	
The letters referred to below shall form pa	ırt of this contract Agreement:	
(i)		
(ii)		
(iii)		
(iv)		
(v)		
(vi)		
(vii)		
(viii)		
(ix)		
	For & on behalf of JPO-SKSKI	
	Signature	
Dated:	Designation	

#### Nepal – India Joint Project Office

### (Government of Nepal & Government of India) Sapta Kosi Sun Kosi Investigation (JPO-SKSKI)

#### **SCHEDULES**

- 1.0 SCHEDULE 'A': Schedule of Quantities & Rates (Enclosed separately).
- 2.0 SCHEDULE 'B': (Not Applicable).
- 3.0 SCHEDULE 'C': (Not Applicable).
- 4.0 SCHEDULE 'D': (Not Applicable).
- 5.0 SCHEDULE 'E': (Not Applicable).
- 6.0 SCHEDULE 'F': (Enclosed).
- 7.0 CLAUSE 10 CC: (Not Applicable).

### SCHEDULE 'F' Reference to General Conditions & Clauses of Contract.

	Name of work:	Diamond Core Drilling for Geo- technical Investigation at Dam Axis Site of Sapta Kosi Multipurpose Project, near Barahakshetra, Dhankuta, Nepal
	Estimated cost of work	NRs. 292.645 Lakh (IRs. 182.904 Lakh)
	Earnest money	NRs. 5.86 Lakh (IRs. 3.66 Lakh)
	Performance Guarantee	5% of Tender value to be deposited within 30 days from the issue of Letter of Intent in the form as specified in Clause 3.1 of General Conditions & Clauses of Contract
	Security Deposit	5% of Tender value to be deducted from running bills as specified in Clause 3.2 of General Conditions & Clauses of Contract
	Officer Inviting Tender	Project Manager, JPO-SKSKI, Biratnagar, Nepal
Definitio	ns & Interpretations:	
1 (v)	Employer	Project Manager, JPO-SKSKI, Biratnagar, Nepal
1(vi)	Engineer	Senior Engineer, JPO-SKSKI Biratnagar, Nepal
1 (vii)	Accepting Authority:	Project Manager, JPO-SKSKI, Biratnagar, Nepal
1 (ix)	Percentage on cost of materials and labour to cover all overheads and profits.	15%
1 (x)	Standard Schedule of Rates:	As per prevailing market rate in Nepal
1 (xi)	Department:	JPO-SKSKI, Biratnagar, Nepal
1.6 (ii)	Standard Form.	CPWD Form-7/8 as modified & corrected up to one month prior to date of submission of Tender.

Claus e 4.1	Authority for fixing compensation under Clause 4.1	Project Manager, JPO-SKSKI, Biratnagar, Nepal
Clause	5	
	Time allowed for execution of work.	<b>300</b> days
	Authority to give fair and reasonable extension of time for completion of work	Project Manager, JPO-SKSKI, Biratnagar, Nepal
Clause	7 : Issue Rate of Material at Site of work	Not Applicable
Clause	8	
8.1	Specifications to be followed for Execution of work.	As given in Tender Document under 'Scope of work and Technical Specification'.
8.5	Deviation Limit beyond which fresh rate for an item may be claimed by contractor	Individual item may change to any extent without any limit.
8.5	Rate of Extra / Substituted items	To be determined by the Project Manager, JPO-SKSKI, Biratnagar in accordance with Clause 8.5 of 'General Conditions & Clauses of Contract'.
	Competent Authority for deciding reduced rates.	Project Manager, JPO-SKSKI, Biratnagar, Nepal

#### **GENERAL CONDITIONS & CLAUSES OF CONTRACT**

#### 1.0 Definition and Interpretation

1.1 The Contract means the documents forming the Tender and acceptance thereof and the formal agreement executed between the Project Manager, JPO-SKSKI, Biratnagar, Nepal and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Employer and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.

In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-

- (i) The expression works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
- (ii) The **Site** shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
- (iii) The **Contractor** shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
- (iv) The **Project Manager** means the Project Manager, JPO-SKSKI, Biratnagar, Nepal and his successors.
- (v) The **Employer** means the Project Manager, JPO-SKSKI, Biratnagar, Nepal.
- (vi) The Engineer means who shall supervise the work on behalf of the Employer.
- (vii) Accepting Authority shall mean the authority mentioned in Schedule-F.
- (viii) Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Project Manager, JPO-SKSKI,

Biratnagar, Nepal, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by Project Manager, JPO-SKSKI, Biratnagar, Nepal of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Project Manager, JPO-SKSKI, Biratnagar, Nepal's faulty design of works.

- (ix) Market Rate shall be the rate as decided by the Employer on the basis of the cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in "Schedule-F" to cover, all overheads and profits.
- (x) Schedule(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the Tender papers or the standard Schedule of Rates of the Project Manager, JPO-SKSKI, Biratnagar, Nepal mentioned in Tendering Data hereunder, with the amendments thereto issued upto the date of receipt of the Tender.
- (xi) **Department** means JPO-SKSKI, Biratnagar, Nepal as specified in Tendering Data.
- (xii) Tender Amount means the value of the entire work as stipulated in the letter of award.

#### 1.2 Scope & Performance:

Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.

Headings and Marginal notes to these General Conditions & Clauses of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.

The contractor shall be made available free of cost, one certified copy of the contract documents except standard specifications, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the Tendering documents. None of these documents shall be used for any purpose other than that of this contract.

#### 1.3 Works to be carried out:

The work to be carried out under the Contract shall, except as otherwise provided for in these conditions, include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours

necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

#### 1.4 Sufficiency of Tender:

The Contractor shall be deemed to have satisfied himself before Tendering as to the correctness and sufficiency of his Tender for the works and of the rates and prices quoted in the 'Schedule of Quantities & Rates'. The rates and prices shall, except as otherwise provided for, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

#### 1.5 Discrepancies & adjustment of errors:

The several documents forming the Contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawing and figured dimensions in preference to scale and Additional Conditions & Special Conditions in preference to General Conditions.

In the case of discrepancy between the Schedule of Quantities, the Specifications and/or the Drawings, the following order of preference shall be observed:

- (i) Description of Schedule of Quantities;
- (ii) Particular Specification, Additional Conditions and Special Condition, if any;
- (iii) Drawings;
- (iv) Technical Specifications;
- (v) Indian Standard Specifications of B.I.S.

If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

Any error in description, quantity or rate in Schedule of Quantities or any omission there from shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.

#### 1.6 Signing of Contract:

The successful Tenderer, on acceptance of his Tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work sign the contract consisting of:

(i) The invitation for Tenders, all the documents including drawings, if any, forming the Tender as issued at the time of invitation of Tender and acceptance thereof together with any correspondence leading thereto.

(ii) Standard Form as mentioned in Tender Document.

#### 2.0 General Obligations:

#### 2.1 Contractor's General Responsibility:

The contractor shall, with due care and diligence, design, execute and complete the work and remedy any defects therein in accordance with the provisions of the contract. The contractor shall provide all superintendence, labour, materials, plant, contractor's equipments and all other things whether of a temporary or permanent nature, required in and for such design, execution, completion and remedying of any defects so far as the necessity for providing the same is specified in or is reasonably to be inferred from the contract.

The contractor shall give prompt notice to the Engineer of any error, omission, fault or other defect in the design or specification for the works which he discovers when reviewing the contract or executing the work.

#### 2.2 Compliance with Statutes, Regulations:

The Contractor shall conform in all respects, including by giving all notices and the paying of all fees, with the provisions:

- (a) Any National or State Statute, Ordinance, or other Law, or any regulation, or bye-law of any local or other duly constituted authority in relation to the execution and completion of the Works and the remedying of any defects therein, and
- (b) The rules and regulations of all public bodies and companies whose property or rights are affected or may be affected in any way by the Works and the Contractor shall keep the Employer indemnified against all penalties and liability of every kind for breach of any such provisions.

#### 2.3 Fossils:

All fossils, coins, articles of value or antiquity and structures and other remains or things of geological importance shall be the absolute property of the Employer. The Contractor shall take reasonable precautions to prevent his workmen or any other persons from removing or damaging any such articles or thing of archaeological interest discovered on the Site and shall immediately acquaint the Engineer of such discovery and carry out the Engineer's instructions for dealing with the same. If, by reason of such instructions, the Contractor suffers delay then the Engineer shall, after due consultation with the Employer and the Contractor, determine any extension of time to which the Contractor is entitled without any financial liability.

#### 2.4 Interference with Traffic and Adjoining Properties:

All operations necessary for the execution and completion of the Works and the remedying of any defects therein shall, so far as compliance with the requirements of the Contract permits, be carried on so as not to interfere unnecessarily or improperly with:

- (a) The convenience of the public, or
- **(b)** The access to, use and occupation of public or private roads and footpaths to or of properties whether in the possession of the Employer or of any other person.

The Contractor shall indemnify the Employer in respect of all claims, proceedings, damages, costs, charges and expenses whatsoever arising out of, or in relation to, any such matters in so far as the Contractor is responsible thereof.

#### 2.5 Damage to Persons and Property:

The Contractor shall, except if and so far as the Contract provides otherwise, indemnify the Employer against all losses and claims in respect of:

- (a) death of or injury to any person, or
- **(b)** loss of or damage to any property (other than the Works),

Which may arise out of or in consequence of the execution and completion of the Works and the remedying of any defects therein, and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect thereof or in relation thereto.

#### 2.6 Insurance against Accident to Workmen:

The Contractor shall insure against liability under Clause 2.5 and shall continue such insurance during the whole of the time that any persons are employed by him on the Works, Provided that, in respect of any persons employed by any Subcontractor, the Contractor's obligations to insure as aforesaid under this Sub-Clause shall be satisfied if the Subcontractor shall have insured against the liability in respect of such persons in such manner that the Employer is indemnified under the policy, but the Contractor shall require such Subcontractor to produce to the Employer, when required, such policy of insurance and the receipt for the payment of the current premium.

If the Contractor fails to effect and keep in force any of the insurances required under the Contract, or fails to provide the policies to the Employer within the period required above, then and in any such case the Employer may effect and keep in force any such insurances and pay any premium as may be necessary for that purpose and from time to time deduct the amount so paid from any monies due or to become due to the Contractor, or recover the same as a debit due from the Contractor.

#### 2.7 Work not to be Sublet and Action in Case of Insolvency:

The contract shall not be assigned or sublet without the written approval of the Employer. If the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of Project Manager, JPO-SKSKI, Biratnagar, Nepal in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Employer have power to adopt the course specified in Clause 5.1 hereof in the interest of JPO-SKSKI, Biratnagar, Nepal and in the event of such course being adopted, the consequences specified in the said Clause shall ensue.

#### 2.8 Changes in Firm's Constitution to be intimated:

Where the contractor is a partnership firm, the previous approval in writing of the Employer shall be obtained before any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where-under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 2.6 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause.

#### 2.9 Instructions in Writing:

Instructions given by the Engineer shall be in writing, provided that if for any reason, the Engineer considers it necessary to give any such instruction orally, the contractor shall comply with such instructions. Confirmation in writing of such oral instructions given by the Engineer, whether before or after carrying out the instruction shall be deemed to be an instruction within the meaning of this Clause. Provided, further that if the contractor, within 7 days, confirms in writing to the Engineer any oral instruction of the Engineer and such confirmation is not contradicted in writing during 7 days by the Engineer, it shall be deemed to be an instruction of the Engineer.

### 2.10 Contractor to Indemnify Project Manager, JPO-SKSKI, Biratnagar Against Patent Rights:

The contractor shall fully indemnify and keep indemnified the Project Manager, JPO-SKSKI, Biratnagar, Nepal against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article

or part thereof included in the contract. In the event of any claims made under or action brought against Project Manager, JPO-SKSKI, Biratnagar, Nepal in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the Project Manager, JPO-SKSKI, Biratnagar, Nepal if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Employer in this behalf.

#### 2.11 Withholding and Lien in Respect of Sums due from Contractor:

(i) Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Employer shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Employer shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been taken from the contractor, the Employer shall be entitled to withhold and have a lien to retain to the extent of such claimed amount or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Employer or any contracting person through the Employer pending finalization adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Employer will be kept withheld or retained as such by the Employer till the claim arising out of or under the contract is determined by the arbitrator (if the contract is governed by the arbitration clause) by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the Employer shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/limited company as the case may be, whether in his individual capacity or otherwise.

(ii) Employer shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to

refund the amount of over-payment and it shall be lawful for Employer to recover the same from him in the manner prescribed in sub-clause (i) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by Employer to the contractor, without any interest thereon whatsoever.

Provided that the Employer shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between Employers on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Employer.

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Employer or any other contracting person or persons through Employer against any claim of the Employer or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Employer or with such other person or persons.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Employer will be kept withheld or retained as such by the Employer or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

#### 2.12 If the Relation Working in the Department:

The contractor shall not be permitted to Tender for works with the Employer (responsible for award and execution of contracts) in which his near relative is posted as Divisional Accountant or as an officer in any capacity as Engineer. He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Gazetted Officer in the department or in the Ministry of Water Resources of Government of India / Government of Nepal. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of the Department. If, however, the contractor is registered in any other department, he shall be debarred from Tendering for any breach of this condition

NOTE: By the term "near relatives" is meant wife, husband, parents and grand parents, children and grand children, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

#### 2.13 Prohibition to Work as Contractor

No engineer of gazetted rank or other gazetted officer employed in engineering or administrative duties in an engineering department of Government of India / Government of Nepal shall work as a contractor or employee of a contractor for a period of two years after his retirement from service of Government of India / Government of Nepal without the previous permission of Government of India / Government of Nepal in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government of India / Government of Nepal as aforesaid, before submission of the Tender or engagement in the contractor's service, as the case may be.

#### 3.0 Security for performance:

#### 3.1 Performance Guarantee:

- (i) The contractor shall submit an irrevocable Performance Guarantee of 5% (Five percent) of the contract price in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule-F from the date of issue of letter of intent. This period can be further extended by the Employer upto a maximum period of 15 days on written request of the contractor stating the reasons for delays in procuring the Bank Guarantee, to the satisfaction of the Employer. This guarantee shall be in the form of either Fixed Deposit Receipts or Bank Guarantee of any Schedule Bank of India / Nepal. In case a fixed deposit receipt of any Bank is furnished by the contractor to the Employer as part of the performance guarantee and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Employer to make good the deficit.
- (ii) The Performance Guarantee shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work plus 60 days beyond that. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest within one month from the date of issue of completion certificate.
- (iii) The Employer shall not make a claim under the performance guarantee except for amounts to which the Employer is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:
  - (a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Employer may claim the full amount of the Performance Guarantee.

- **(b)** Failure by the contractor to pay Employer any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Employer.
- (iv) In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the employer.

#### 3.2 Recovery of Security Deposit:

The person/persons whose Tender(s) may be accepted (hereinafter called the contractor) shall permit employer at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 10% of the gross amount of each running bill till the sum along with the sum already deposited as earnest money, will amount to security deposit of 5% of the Tender value of the work. Such deductions will be made and held by Employer by way of Security Deposit unless he/they has/have deposited the amount of Security at the rate mentioned above in cash or in the form of fixed deposit receipts / bank guarantee of a Schedule Bank of India / Nepal. In case a fixed deposit receipt of any Bank is furnished by the contractor to the Employer as part of the security deposit and the Bank is unable to make payment against the said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Employer to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the contractor by Employer on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt or bank guarantee Tendered by Schedule Banks of India / Nepal endorsed in favour of the Employer, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bills of the contractor at the rates mentioned above and the Earnest money if deposited in cash at the time of Tenders will be treated a part of the Security Deposit. The Security Deposit of 5% deducted through running bill including adjustment of Earnest Money Deposit shall be refunded to the contractor after six months from the date of issue of completion certificate.

#### 4.0 Commencement and Delays

#### 4.1 Compensation for Delay:

If the contractor fails to maintain the required progress in terms of clause 5.4 or to complete the work and clear the site on or before the closure of contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Employer on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated

below as the competent authority (whose decision in writing shall be final and binding) may decide on the amount of Tendered value of the work for every completed day/month (as applicable) that the progress remains below that specified in Clause 5.4 or that the work remains incomplete.

This will also apply to items or group of items for which a separate period of completion has been specified.

### Compensation @ 1.5 % per month of delay for delay of work to be computed on per day basis

Provided always that the total amount of compensation for delay to be paid under this Condition shall not exceed **10%** of the Tender Value of work or of the Tender Value of the item or group of items of work for which a separate period of completion is originally given. For the purpose of this clause, month shall be considered as consisting of 30 days.

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the Employer.

#### 5.0 Determination of Contract

#### 5.1 When Contract Can Be Determined:

Subject to other provisions contained in this clause, the Employer may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the contract in any of the following cases:

- (i) If the contractor having been given by the Employer/Engineer a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or unworkmanlike manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.
- (ii) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- (iii) If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Employer (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Employer.
- (iv) If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within

- the period specified in a notice given in writing in that behalf by the Employer.
- (v) If the contractor persistently neglects to carry out his obligations under the contract and/or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Employer.
- (vi) If the contractor commits any acts mentioned in Clause 2.7 hereof:
- (vii) If the work is not started by the contractor within the stipulated time:

  When the contractor has made himself liable for action under any of the cases aforesaid, the Employer shall have powers:
- (a) To determine or rescind the contract as aforesaid (of which termination or rescission notice in writing to the contractor under the hand of the Employer shall be conclusive evidence). Upon such determination or rescission, the Earnest Money Deposit, Security Deposit already recovered and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Employer.
- (b) After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part thereof, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined or rescinded as above, shall not be allowed to participate in the Tendering process for the balance work.

In the event of above courses being adopted by the Employer, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof or actually performed under this contract unless and until the Employer has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

#### 5.2 When Reasons not Within the Control of Contractor for non-Start of the Work:

In case, the work cannot be started due to reasons not within the control of the contractor within stipulated time for completion of work, either party may close the contract. In such eventuality, the Earnest Money Deposit and the Performance Guarantee of the contractor shall be refunded, but no payment on account of interest, loss of profit or damages etc. shall be payable at all.

### 5.3 Contractor liable to pay compensation even if action not taken under Clause 5.1:

In any case in which any of the powers conferred upon the Employer by Clause 5.1 thereof, shall have become exercisable and the same are not exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensation shall remain unaffected. In the event of the Employer putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (or at the sole discretion of the Employer which shall be final and binding on the contractor) use as on hire (the amount of the hire money being also in the final determination of the Employer) all or any tools, plant, materials and stores, in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor and intended to be used for the execution of the work/or any part thereof, paying or allowing for the same at the contract rates, or, in the case of these not being applicable, at current market rates to be certified by the Employer, whose certificate thereof shall be final and binding on the contractor, clerk of the works, foreman or other authorised agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Employer may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor and his risk in all respects and the certificate of the Employer as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

#### 5.4 Time and Extension for Delay:

The time allowed for execution of the Works as specified in the Tender document or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works shall commence from such time period as mentioned in letter of intent or from the date of handing over of the site whichever is later. If the Contractor commits default in commencing the execution of the work as aforesaid, Employer shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee absolutely.

Within 15 days from the date of signing of the contract, the Contractor shall submit a Time and Progress Chart and get it approved by the Employer.

If the work(s) be delayed by:-

- (i) Force Majeure, or
- (ii) Abnormally Bad Weather, or
- (iii) Serious Loss or Damage by Fire, or
- (iv) Civil Commotion, Local Commotion of Workmen, Strike or Lockout, affecting any of the trades employed on the work, or

- (v) Delay on the part of other contractors or tradesmen engaged by Employer in executing work not forming part of the Contract, or
- (vi) Non-availability of stores, which are the responsibility of Project Manager, JPO-SKSKI, Biratnagar, Nepal to supply or
- (vii) Any other cause which, in the absolute discretion of the authority mentioned in Schedule 'F' is beyond the Contractor's control.

then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Employer but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Employer to proceed with the works.

Request for extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired. In any such case the authority mentioned in **Schedule-F** may give a fair and reasonable extension of time. Such extension shall be communicated to the Contractor by the Employer in writing, within 3 months of the date of receipt of such request. Non-application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Employer and this shall be binding on the contractor.

#### 6.0 Measurement and Payment

#### 6.1 Measurements of Work Done:

Engineer shall, except as otherwise provided, ascertain and determine by measurement the value in accordance with the contract of work done. All measurement of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the contract. All measurements and levels shall be taken jointly by the Engineer or his authorised representative and by the contractor or his authorised representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer and the contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

If for any reason the contractor or his authorised representative is not available and the work of recording measurements is suspended by the Engineer or his representative, the Engineer shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorised representative does not remain present at the time of such measurements after the contractor or his authorised representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in

his absence by the Engineer or his representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available then a mutually agreed method shall be followed.

The contractor shall give not less than seven days' notice to the Engineer or his authorised representative in-charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer or his authorised representative in-charge of the work who shall within the aforesaid period of seven days inspect the work, and if any work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer's consent being obtained in writing the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Employer or his authorised representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defect's liability period.

#### 6.2 Intermediate Payment:

Running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the Department in triplicate on or before the date of every month fixed for the same by the Employer. Employer shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer shall prepare or cause to be prepared such bills in which event no claims whatsoever

due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Employer.

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Employer relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Employer under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the department to act under the terms of this contract for delay in the completion of work, if the extension of date of completion is not granted by the competent authority.

#### 6.3 Completion Certificate and Completion Plans:

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer and within thirty days of the receipt of such notice the Employer shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for his/their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution thereof, and not until the work shall have been measured by the Employer/Engineer. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Employer may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

#### 6.4 Payment of Final Bill:

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Employer whichever is earlier. No further claims shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of the bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Employer, will, as far as possible be made within the period specified herein under, the period being reckoned from the date of receipt of the bill by the Engineer, complete with account of materials issued by the Department and dismantled materials.

(i) If the Contract value of work is upto IRs.10 Lakh. : 3 months

(ii) If the Contract value of work exceeds IRs.10 Lakh. : 6 months

#### 7.0 Materials and Machineries

#### 7.1 Materials Supplied by the Employer:

Materials which Employer will supply are shown in **Schedule-F** which also stipulates place of issue and rate(s) to be charged in respect thereof. The contractor shall be bound to procure them from the Employer.

As soon as the work is awarded, the contractor shall finalise the programme for the completion of work as per contract and shall give his estimates of materials required on the basis of drawings/or schedule of quantities of the work. The Contractor shall give in writing his requirement to the Employer which shall be issued to him keeping in view the progress of work as assessed by the Employer, in accordance with the agreed phased programme of work indicating monthly requirements of various materials. The contractor shall place his indent in writing for issue of such materials at least 7 days in advance of his requirement.

Such materials shall be supplied for the purpose of the contract only and the value of the materials so supplied at the rates specified in the aforesaid schedule shall be set off or deducted, as and when materials are consumed in items of work (including normal wastage) for which payment is being made to the contractor, from any sum then due or which may therefore become due to the contractor under the contract or otherwise or from the security deposit. At the time of submission of bills, the contractor shall certify that balance of materials supplied is available at site in original good condition.

The contractor shall submit along with every running bill (on account or interim bill) material-wise reconciliation statements supported by complete calculations reconciling total issue, total consumption and certified balance

(diameter/section-wise in the case of steel) and resulting variations and reasons therefore. Employer shall (whose decision shall be final and binding on the contractor) be within his rights to follow the procedure of recovery in clause 7.8 at any stage of the work if reconciliation is not found to be satisfactory.

Not withstanding anything to the contrary contained in any other clause of the contract and (or the CPWA Code) all stores/materials so supplied to the contractor or procured with the assistance of the Government shall remain the absolute property of Government and the contractor shall be the trustee of the stores/materials, and the said stores/materials shall not be removed/disposed off from the site of the work on any account and shall be at all times open to inspection by the Employer or his authorised agent. Any such stores/materials remaining unused shall be returned to the Employer in as good a condition in which they were originally supplied at a place directed by him, at a place of issue or any other place specified by him as he shall require, but in case it is decided not to take back the stores/materials the contractor shall have no claim for compensation on any account of such stores/materials so supplied to him as aforesaid and not used by him or for any wastage in or damage to in such stores/materials.

On being required to return the stores/materials, the contractor shall hand over the stores/materials on being paid or credited such price as the Employer shall determine, having due regard to the condition of the stores/materials. The price allowed for credit to the contractor, however, shall be at the prevailing market rate not exceeding the amount charged to him, excluding the storage charge, if any. The decision of the Employer shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to account for contravention of the terms of the licenses or permit and/or for criminal breach of trust, be liable to Government for all advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach. Provided that the contractor shall in no case be entitled to any compensation or damages on account of any delay in supply or nonsupply thereof all or any such materials and stores provided further that the contractor shall be bound to execute the entire work if the materials are supplied by the Government within the original scheduled time for completion of the work plus 50% thereof or schedule time plus 6 months whichever is more if the time of completion of work exceeds 12 months, but if a part of the materials only has been supplied within the aforesaid period, then the contractor shall be bound to do so much of the work as may be possible with the materials and stores supplied in the aforesaid period. For the completion of the rest of the work, the contractor shall be entitled to such extension of time as may be determined by the Employer whose decision in this regard shall be final and binding on the contractor.

The contractor shall see that only the required quantities of materials are got issued. Any such material remaining unused and in perfectly good/original condition at the time of completion or determination of the contract shall be returned to the Employer at the stores from which it was issued or at a place directed by him by a notice in writing. The contractor shall not be entitled for

loading, transporting, unloading and stacking of such unused material except for the extra lead, if any involved, beyond the original place of issue.

#### 7.2 Materials to be provided by the Contractor:

The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the Employer.

#### 7.3 Return of Surplus Materials:

Notwithstanding anything contained to the contrary in this contract, where any materials for the execution of the contract are procured with the assistance of Employer either by issue from Employer's stocks or purchase made under orders or permits or licenses issued by Government of India / Government of Nepal, the contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the written permission of the Employer and return, if required by the Employer, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination for any reason whatsoever on being paid or credited such price as the Employer shall determine having due regard to the condition of the materials. The price allowed to the contractor however shall not exceed the amount charged to him excluding the element of storage charges. The decision of the Employer shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to action for contravention of the terms of the license or permit and/or for criminal breach of trust, be liable to Employer for all moneys, advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach.

#### 7.4 Hire of Plant and Machinery:

The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work except for the Plant & Machinery listed in Tendering Document and stipulated for issue to the contractor on hire charges basis.

#### 7.5 Compensation during War like Situation:

The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Employer and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Employer to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the reconstruction of all works ordered by the Employer, such payments being in

addition to compensation upto the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Employer. The contractor shall be paid for the damages/destruction suffered and for the restoring the material at the rate based on analysis of rates Tendered for in accordance with the provision of the contract. The certificate of the Employer regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary and (b) for any material etc. not on the site of the work or for any tools, plant, machinery and other things not intended for the work.

In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Employer.

#### 8.0 Execution of Work

#### 8.1 Works to be executed in accordance with Specifications, Drawings, Orders etc.

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Employer and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specifications specified in Tendering Document or in any Bureau of Indian Standard or any other, published standard or code or, Schedule of Quantities & Rates or any other printed publication referred to elsewhere in the contract.

The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervision of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The Contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

### 8.2 Programme to be submitted:

The contractor shall, within 15 days after the date of letter of acceptance, submit to the Employer for his consent a programme, in such form and detail as the Engineer shall reasonably prescribed, for the execution of the work. The Contractor shall, whenever required by the Employer, also provide in writing for his information a general description of the arrangements and methods which the contractor proposes to adopt for the execution.

If at any time it should appear to the Employer that the actual progress of the work does not conform to the programme to which consent has been given, the contractor shall produce, at the request of the Employer, a revised programme showing the modifications to such programme necessary to ensure completion of the works within the time for completion.

### 8.3 Examination of Works before Covering Up:

No part of the work shall be covered up or put out of view without the approval of the Engineer. The contractor shall afford full opportunity for the Engineer to examine and measure any such part of the work which is about to be covered up or put out of view and to examine foundations before any part of the work is placed thereon. The contractor shall give notice to the Engineer whenever any such part of the work or foundation is or are ready or about to be ready for examination and the Engineer shall, without unreasonable delay, unless he considers it unnecessary and advises the contractor accordingly, attend for the purpose of examining and measuring such part of the works or of examining such foundations.

### 8.4 Removal of Improper Work, Materials or Plant:

The Engineer shall have authority to issue instructions from time to time for:

- (a) the removal from the site, within such time as may be specified in the instructions, of any materials or plant which, in the opinion of the engineer, are not in accordance with the Contract.
- (b) substitution of proper and suitable materials or Plant, and
- (c) The removal and proper re-execution in respect materials, Plant or Workmanship, or design by the contractor or for which he is responsible.

In case of default on the part of the contractor in carrying out such instructions within the time specified therein or if none, within a reasonable time, the Employer shall be entitled to employ and pay other persons to carry out the same and all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the contractor, be determined by the Engineer and shall be recoverable from the contractor by the Employer, and may be deducted by the Employer from any moneys due or to become due to the contractor.

### 8.5 Deviations/Variations Extent and Pricing:

The Employer shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Employer and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

The time for completion of the works shall, in the event of any deviations resulting in additional cost over the Tendered value being ordered, be extended, if requested by the contractor, as follows:

- (i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original Tendered value plus
- (ii) 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Employer.

In the case of extra item(s) the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the Employer shall within one month of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

In the case of substituted items, the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the aforesaid Para.

- (a) If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted) the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
- (b) If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted) the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in Schedule-F, the contractor may within

fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis, for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities the Employer shall within one month of receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Schedule-F, and the Employer shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.

The contractor shall send to the Employer once every three months an upto date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Employer which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Employer may authorize consideration of such claims on merits.

Any operation incidental to or necessarily has to be in contemplation of Tenderer while filing Tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the Tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

### 8.6 Action in Case Work not done as per Specifications:

All works under or in course of execution or executed in pursuance of the contract shall at all times be open and accessible to the inspection and supervision of the Employer, his authorised subordinates in charge of the work and all the superior officers, officer of the Quality Control Organisation of the Department and of the Chief Technical Examiner's Office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Employer or his authorised subordinates in charge of the work or to the Engineer in charge of Quality Control or his subordinate officers or to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with

materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract the contractor shall, on demand in writing which shall be made within six months of the completion of the work from the Employer specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Employer in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 4.1 of the contract (for non-completion of the work in time) for this default.

In such case the Employer may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the competent authority may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and/or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Employer to be conveyed in writing in respect of the same will be final and binding on the contractor.

### 8.7 Restriction on working Hours:

Subject to any provision to the contrary contained in the Contract, none of the Works shall, save as hereinafter provided, be carried on during the night without the consent of the Engineer, except when work is unavoidable or absolutely necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Engineer. Provided that the provisions of this Clause shall not be applicable in the case of any work which it is customary to carry out by the multiple shifts.

### 8.8 Taking Over of Sections or Parts:

The Contractor may request and the Engineer shall issue a Taking-Over Certificate in respect of:

- (a) any Section in respect of which a separate Time for Completion is provided in the contract,
- **(b)** any substantial part of the Permanent Works which has been both completed to the satisfaction of the Engineer and, otherwise than as provided for in the Contract, occupied or used by the Employer, or
- (c) any part of the Permanent Works which the Employer has elected to occupy or use prior to the completion (where such prior occupation or

use is not provided for in the Contract or has not been agreed by the Contractor as a temporary measure).

### 8.9 Urgent Remedial Work

If, by reason of any accident, or failure, or other event occurring to, in, or in connection with the Works, or any part thereof, either during the execution of the Works, or during the performance guarantee period, any remedial or other work is, in the opinion of the Engineer, urgently necessary for the safety of the Works and the Contractor is unable or unwilling at once to do such work, the engineer shall be entitled to employ and pay other persons to carry out such work as the Engineer may consider necessary. If the work or repair so done by the Engineer is work which, in the opinion of the Engineer, the Contractor was liable to do at his own cost under the Contract, then all costs consequent thereon or incidental thereto shall, after due consultation with the Employer and the Contractor, be determined by the Engineer and shall be recoverable from the Contractor by the Employer, and may be deducted by the Employer from any money due or to become due to the Contractor and the Engineer shall notify the Contractor accordingly, with a copy to the Employer. Provided that the Engineer shall, as soon after the occurrence of any such emergency as may be reasonably practicable, notify the Contractor thereof.

### 8.10 Action where no specifications are specified:

In the case of any class of work for which there is no such specifications mentioned in Tender Document, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications and/or directions of Employer. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturer's specifications, if not available then as per District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Employer.

### 8.11 Cost of Remedying Defects:

All work of amendment, reconstruction, and remedying defects, shrinkages or other faults as Engineer may instruct shall be executed by the Contractor at his own cost if the necessity thereof is, in the opinion of the Engineer, due to:

- (a) the use of materials, Plant or workmanship not in accordance with the Contract.
- **(b)** where the Contractor is responsible for the design of part of the Permanent Works, any fault in such design, or
- (c) the neglect or failure on the part of the Contractor to comply with any obligation, expressed or implied, on the Contractor's part under the Contract.

### 8.12 Rate of Progress:

If for any reason, which does not entitle the contractor to an extension of time, the rate of progress of the work in the opinion of the Engineer, too slow to comply with the time of completion, the Engineer shall so notify the contractor who shall thereupon takes such steps as are necessary, subject to the consent of Engineer to expedite progress so as to comply with the time for completion. The Contractor shall not be entitled to any additional payment for taking such steps.

### 8.13 Supply of Drawings and Documents:

Two copies of the drawings shall be provided to the contractor free of charge. The contractor shall make at his own cost any further copies required by him. Unless it is strictly necessary for the purposes of the contract, the drawings, specifications and other documents provided by the Employer or the Engineer shall not, without the consent of the Engineer, be used or communicated to a third party by the contractor. One copy of the drawings, provided to or supplied by the contractor as aforesaid, shall be kept by the contractor on the site and the same shall at all reasonable times be available for inspection and use by the Engineer and by any other person authorized by the Engineer in writing.

The contractor shall give notice to the Engineer, with a copy to the Employer, whenever planning and execution of the work is likely to be delayed or disrupted. The notice shall include delays of the drawings or instructions required and of why and by when it is required and of any delay or disruption likely to be suffered if it is late. If by reason of any failure or inability of the Engineer to issue, within a time reasonable in all circumstances, any drawing or instruction for which notice has been given by the contractor, the contractor suffers delay and/or incurs cost, then the Engineer shall, after due consultation with the Employer and the contractor, determine any extension of time to which the contractor is entitled and the amount of such cost which shall be added to the contract price.

If the failure or inability of the Engineer to issue any drawings or instructions is caused in while or in part by the failure of the contractor to submit drawings, specifications or other documents which he is required to submit under the contract, the Engineer shall take such failure by the contractor into account when making his determination for the Extension of Time or the amount of cost.

### 9.0 Cancellation and Termination of Contract:

### 9.1 Foreclosure of Contract due to Abandonment or Reduction in Scope of Work:

If at any time after acceptance of the Tender, Employer shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Employer shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account

of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure:

- (i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.
- (ii) Employer shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided, however, Employer shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by Employer, cost of such materials as detailed by Engineer shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.
- (iii) If any materials supplied by Employer are rendered surplus, the same except normal wastage shall be returned by the contractor to Employer at rates not exceeding those at which these were originally issued less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to Employer stores, if so required by Employer, shall be paid.
- (iv) Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.
- (v) Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer furnish to him books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition.

The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2% of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted Tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the Employer as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, the Employer shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tool,

plants and materials and any other sums which at the date of termination were recoverable by the Employer from the contractor under the terms of the contract.

### 9.2 Cancellation of Contract in Full or Part:

If contractor:

- (i) at any time makes default in proceeding with the works or any part of the work with the due diligence and continues to do so after a notice in writing of 7 days from the Employer; or
- (ii) commits default to complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Employer; or
- (iii) fails to complete the works or items of work with individual dates of completion, on or before the date(s) of completion, and does not complete them within the period specified in a notice given in writing in that behalf by the Employer; or
- (iv) shall offer or give or agree to give to any person in Employer service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for Employer; or
- shall enter into a contract with Employer in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Accepting Authority/Employer; or
- (vi) Shall obtain a contract with Employer as a result of wrong Tendering or other non-bonafide methods of competitive Tendering; or
- (vii) being an individual, or if a firm, any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any Insolvency Act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors; or
- (viii) being a company, shall pass a resolution or the Court shall make an order for the winding up of the company, or a receiver or manager on behalf of the debenture holders or otherwise shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or manager; or
- (ix) shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days; or

assigns, transfers, sublets (engagement of labour on a piece-work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Accepting Authority;

The Accepting Authority may, without prejudice to any other right or remedy which shall have accrued or shall accrue hereafter to Employer, by a notice in writing to cancel the contract as a whole or only such items of work in default from the Contract.

The Employer shall on such cancellation by the Accepting Authority have powers to:

- **a.** take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or
- **b.** carry out the incomplete work by any means at the risk and cost of the contractor.

On cancellation of the contract in full or in part, the Employer shall determine what amount, if any, is recoverable from the contractor for completion of the works or part of the works or in case the works or part of the works is not to be completed, the loss or damage suffered by Employer. In determining the amount, credit shall be given to the contractor for the value of the work executed by him up to the time of cancellation, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor.

Any excess expenditure incurred or to be incurred by Employer in completing the works or part of the works or the excess loss or damages suffered or may be suffered by Employer as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to Employer in law be recovered from any moneys due to the contractor on any account, and if such moneys are not sufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor shall fail to pay the required sum within the aforesaid period of 30 days, the Employer shall have the right to sell any or all of the contractor's unused materials, construction plant, implements, temporary buildings, etc. and apply the proceeds of sale thereof towards the satisfaction of any sums due from the contractor under the contract and if thereafter there be any balance outstanding from the contractor, it shall be recovered in accordance with the provisions of the contract.

Any sums in excess of the amounts due to Employer and unsold materials, construction plant etc., shall be returned to the contractor, provided always that if cost or anticipated cost of completion by Employer of the works or part of the works is less than the amount which the contractor would have been paid had he completed the works or part of the works, such benefit shall not accrue to the contractor.

### 9.3 Suspension of Work:

- (i) The contractor shall, on receipt of the order in writing of the Employer, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Employer may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons:
  - a. on account of any default on the part of the contractor or;
  - **b.** for proper execution of the works or part thereof for reasons other than the default of the contractor; or
  - c. for safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Employer.

- (ii) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:
  - a. the contractor shall be entitled to an extension of time equal to the period of every such suspension plus 25%, for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and:
  - b. If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Employer may consider reasonable in respect of salaries and/or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2% to cover indirect expenses of the contractor. Provided the contractor submits his claim supported by details to the Employer within fifteen days of the expiry of the period of 30 days.
- (iii) If the works or part thereof is suspended on the orders of the Employer for more than three months at a time, except when suspension is ordered for reason (a) in sub-para (i) above, the contractor may after receipt of such order serve a written notice on the Employer requiring permission within fifteen days from receipt by the Employer of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by Employer or where it affects whole of the works, as an abandonment of the works by Employer, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Employer. In the event of the contractor treating the suspension as an abandonment of the contract by Employer, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall,

however, be entitled to such compensation, as the Employer may consider reasonable, in respect of salaries and/or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2% to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Employer within 30 days of the expiry of the period of 3 months.

Provided, further, that the contractor shall not be entitled to claim any compensation from Employer for the loss suffered by him on account of delay by Employer in the supply of materials as provided in Tender Document where such delay is covered by difficulties relating to the supply of wagons, force majeure including non-allotment of such materials by controlling authorities, acts of God, acts of enemies of the state/country or any reasonable cause beyond the control of the Employer.

#### 9.4 Termination of Contract after the Death of Contractor:

Without prejudice to any of the rights or remedies under this contract if the contractor dies, the Engineer on behalf of the Employer shall have the option of terminating the contract without compensation to the contractor.

### 10.0 Arbitration:

In case, of any dispute, controversy or claim arising out of or relating to this Contract or the breach, termination or invalidity thereof shall, on the initiative of either party, be referred for settlement to an arbitration tribunal consisting of one arbitrator to be nominated by the Employer, one by the contractor and the third by mutual agreement of the parties.

If either of the parties fails to appoint its arbitrator within sixty days after receipt of notice for the appointment of an arbitrator, the arbitrator on behalf of the failing party shall be appointed by District Court of Nepal upon request of the other party. If the third arbitrator is not appointed within sixty days of the appointment of the respective arbitrators, such arbitrator shall be appointed by the District Court of Nepal upon the request of either party.

The arbitration shall be conducted in accordance with the prevailing rule and law of Nepal and shall be held at Biratnagar, Nepal. The decision of the majority of the arbitrators shall be final and binding upon the parties. Performance under the Contract shall continue during the arbitration proceeding.

### 11.0 Employment of Technical Staff and Employees:

Contractors Superintendence, Supervision, Technical Staff & Employees

(i) The contractor shall provide all necessary superintendence during execution of the work and all along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The contractor shall immediately after receiving letter of acceptance of the Tender and before commencement of the work, intimate in writing to the Employer the name(s), qualifications, experience, age, address(s) and other particulars of the Authorized Technical Representative to be incharge of the work.

The Authorized Technical Representative shall be actually available at site fully during all stages of execution of work, during recording/checking/test checking of measurement of works and whenever so required by the Employer and shall also note down instructions conveyed by the Employer or his designated representative in the Site Order Book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements/checked measurements/test checked measurements. Substitutes, duly approved by Employer of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative by more than two days. If the Employer, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or/is/are effectively attending or fulfilling the provision of this clause, a recovery @ IRs. 500/- (NRs. 800/-) per day of absence shall be affected from the contractor and the decision of the Employer as recorded in the Site Order measurements recorded. checked/test Book and checked Measurement Books shall be final and binding on the contractor.

Further if the contractor fails to appoint a suitable principal technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their responsibilities satisfactorily, the Employer shall have full powers to suspend the execution of the work until such date as a suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) along with every on account bill/final bill and shall produce evidence if at any time so required by the Employer.

(ii) The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.

The Employer shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Employer to be undesirable. Such person shall not be employed again at works site without the written permission of the Employer and the persons so removed shall be replaced as soon as possible by competent substitutes.

### Nepal – India Joint Project Office (Government of Nepal & Government of India) Sapta Kosi Sun Kosi Investigation (JPO-SKSKI)

### **ADDITIONAL TERMS & CONDITIONS**

In addition to 'General Conditions & Clauses of the Contract', the following 'Additional Terms and Conditions' shall also form part of the Tender documents/contract and shall be binding on both the parties of contract. Whenever any clause of 'Additional Terms and Conditions' is contradictory to the 'General Conditions' shall be taken as have been issued in supersession of the 'General Conditions & Clauses of the Contract'.

- 1.0 The work shall be executed in accordance with technical specifications & other requirements given in the Tender Documents.
- 2.0 Location of Site: Plate-I and Plate-II showing vicinity map and the location of drill holes are enclosed. However, the exact location of drill holes shall be intimated by Engineer or his authorized representative after award of work.
- **3.0 Inspection of Site and Site Conditions:** Before submitting Tender, the Tenderer shall inspect the site of work and shall fully acquaint himself about the conditions with regard to site, working condition, availability & requirements of approach paths, availability of water, power etc.
- **4.0** Entire work shall remain open for inspection to the Project Manager, JPO-SKSKI, Biratnagar / Engineer in charge or his authorized representative at all stages of execution till completion.
- 5.0 The completion time specified for work shall be exclusive of time consumed for performing the various tests not in the scope of the contract. The Daily Drill Report shall form the basis for determining the time consumed in different activities.
- 6.0 Engineer in charge reserves the right to change the depth / location of drill holes as per the geological conditions as revealed during drilling and its logging. No claim on account of above changes and variations shall be entertained.
- 7.0 No payment shall be made to the contractor for damage caused by rains or other natural calamities during the execution of the works and no such claim on these accounts shall be entertained.
- 8.0 Customs Clearance Certificate for Plant & Equipment and Other Material: Immediately after award of work (i.e. Issue of Letter of Intent) but within 15 days, the contractor shall supply to the Project Manager, JPO-SKSKI, Biratnagar, the list of persons, materials and plant & equipment he intends to deploy for the

works and for which permission for cross border movement is necessary for smooth execution of work along with their cost and entry point in Nepal. (Applicable to the Indian Contractor only).

9.0 Facilities and Taxes/Duties Exemptions available to the Contractor under Present Contract: As per understanding reached between Government of Nepal and Government of India, and Government of Nepal has agreed to provide under mentioned facilities in respect of goods, materials, equipment, machinery, transport vehicles etc., which are required for the project by contractors engaged by the JPO-SKSKI, Nepal for its works. The Project Manager, JPO-SKSKI, Biratnagar shall arrange necessary permissions and exemptions from for Indian Contractors.

### 10.0 Clauses Applicable to Indian Contractor:

- **10.1** Expeditious entry into Nepal or exit from Nepal.
- **10.2** Exemption from payment of all custom duties, taxes including VAT, cesses and levies on vehicles, goods, equipment, machinery etc. imported from India by the contractor for the project.
- 10.3 Exemption from payment/refund of all dues, taxes of any kind including VAT, cesses and levies of any kind, in respect of goods, materials, equipment, machinery, transport vehicles etc, purchased and procured in Nepal for the Project. In case of refund, the contractor shall submit request with VAT bills to the VAT office for reimbursement and VAT office will reimburse the paid VAT within the prescribed time.
- 10.4 Further, when these items are no longer needed for the project, unless they have been otherwise paid for, they shall be allowed to be taken back to India without let or hindrance and shall be exempt from payment of all duties, taxes including VAT, cesses and levies, of any kind in Nepal.
- **10.5** Shall not levy any taxes on any Indian national or Indian firm employed by the JPO-SKSKI, Biratnagar, Nepal for its works.
- 10.6 The Contractor of the JPO-SKSKI, Biratnagar, Nepal from India shall be free to import an amount of Indian currency of acceptable denomination in Nepal that may be deemed necessary for execution of their work. They shall be allowed to repatriate their currency holdings.
- 10.7 When any goods, materials (except timber and wood), or items or equipment, machinery, transport vehicles etc., purchased for the Project by the Contractor are no longer required for the Project, the contractor shall be allowed to bring them back to India without any let or hindrance, and shall exempt all such goods, materials, equipment, machinery, transport vehicles etc., from payment of customs duties and all other duties, taxes including VAT, cesses and levies of any kind. However, if they

are disposed of in Nepal, taxes including VAT and duties in accordance with the Nepalese laws shall be levied on such articles.

### Clauses Applicable to both Indian & Nepalese Contractor:

- 10.8 Government of Nepal shall accord exemption from payment of VAT or contract amount/contract tax on all the contracts connected with the project.
- 11.0 In these Tender documents, the names/nomenclatures mention below in left column shall be read as given in right column:

	<u>Instead of</u>	Read as
1.	President of India	JPO-SKSKI
2.	Government of India	JPO-SKSKI
3.	Central Public Works Department	JPO-SKSKI
4.	CPWD	JPO-SKSKI
5.	Director General of Works/ Chief Engineer	Project Manager
6.	Superintending Engineer	Project Manager

**12.0** Any corrections/cuttings in the Tender document shall be initialed by the Tenderer.

Sd/-Project Manager, JPO-SKSKI, Biratnagar, Nepal

# Nepal – India Joint Project Office (Government of Nepal & Government of India) Sapta Kosi Sun Kosi Investigation (JPO-SKSKI) SPECIAL TERMS AND CONDITIONS

In addition to 'General Conditions & Clauses of Contract' and 'Additional Terms and Conditions of the Contract', the following 'Special Terms and Conditions of Contract' shall also form part of the Tender documents/contract and shall be binding on both the parties of the Contract. Wherever any clause of the 'Special Terms & Conditions of Contract' as given herein is contradictory to the 'General Conditions & Clauses of Contract' and 'Additional Terms and Conditions of the Contract', clauses of 'Special Terms and Conditions of Contract' shall prevail and shall be taken as have been issued in suppression of 'General Conditions & Clauses of Contract' and 'Additional Terms and Conditions of the Contract'.

- 1.0 Protection of Trees and Plants: The contractor shall take all necessary precautions so that forest trees and plants in the working area are not destroyed. In the event of any damage to trees and plants, the contractor shall be fully responsible for such damages. The contractor shall also ensure that none of his workers or their family members cut any tree in the area of the project failing which the contractor shall be held liable for the act of such worker or his family members.
- **2.0 Supply of Fuel to Workers:** The contractor shall ensure free supply of fuel to each of the worker engaged on the works under the contract for their daily needs, throughout the contract period and its extension, if any,
- 3.0 Employment of Local Labour: The recruitment of labour, technical and other personnel shall be confined to the nationals of either country. The contractor shall always give preference to the employment of unskilled, semiskilled/skilled labour and workmen from the local area/District. The contractor shall adhere to all the prevailing labour laws and acts of Nepalese Territory.
- **4.0 Natural Water Sources:** The contractor shall not obstruct/damage any lines of drainage without prior approval of the Engineer.
- **5.0** Law & Order: The contractor shall provide suitable/congenial conditions and atmosphere and maintain law and order during the execution of work.
- **6.0 Safety Codes:** The contractor shall comply with the provision of relevant Bureau of Indian Standards (BIS) codes, local Government Rules and Regulations and shall own responsibilities and liabilities on account of default, if any.
- **7.0 Safety Signs:** Contractor shall be responsible for providing, erecting and maintaining all safety signs necessary for the safety of those working on or passing through the site.

- **8.0** Arrangement for First Aid and Emergency Medical Aid: Not withstanding to the contractor's obligation to comply with the requirement of the safety manual, the contractor's attention is particularly drawn on the following requirements:
  - **8.1** The contractor shall be responsible for providing operating and maintaining a first aid clinic at the site at his own cost for emergency treatment of his employees and labour.
  - **8.2** Emergency treatment shall include carrying of emergency patient until transfer to a permanent hospital or other place of treatment.
- **9.0 Approach Roads:** Contractor shall, at all times, keep the existing approaches through for public and transport.
- **10.0 Haulage Paths:** The haulage paths shall also form a part of the inspection paths during the execution of work and the contractor shall maintain them properly.
- 11.0 Site Reclamation/Restoration: On completion of the work to the satisfaction of Engineer, the contractor shall remove all equipment, materials, temporary facilities, remains, rubbish, debris and excess excavated soil resulting from his work area and from other area placed at his disposal by the Engineer from public path, roads and from streams and ditches and shall restore all these places to proper conditions to the satisfaction of the Engineer.
- **12.0 Statutory Rules and Regulation of Nepal**: The Contractor shall be well versed with such statutory rules & regulations etc. as may be prevalent in Nepalese territory and contractor shall indemnify and keep the JPO-SKSKI indemnify from and against such liability.
- 13.0 Local Inhabitation/Structures: Contractor shall ensure that local inhabitation/ structures falling into vicinity of work are not disturbed while executing the job. Damage, if any, occurring due to negligence of contractor shall be to his account.
- **14.0 Water for Drinking & Drilling, Sanitation and Electricity:** The contractor shall make his own arrangement for proper sanitation for staff; water required for drinking & drift excavation purposes and for electricity.
- **15.0 Personnel:** The contractor shall provide experienced driller, foremen and technicians to perform the work covered herein. The Engineer has the right to direct the contractor for the removal of any personnel from the work, who in his opinion, is not qualified, unwilling, or is unable to perform the work and responsibilities assigned to him by the contractor.
- **16.0 Accommodation**: No office and housing accommodation for the contractor or his personnel shall be made available by the Engineer and Contractor shall be required to make his own arrangement.

The Engineer may allot land, free of charges, if available, for the erection of temporary accommodation for the contractor's staff and workmen. The contractor must maintain the area allotted to him in neat and clean condition as directed by the Engineer. The Contractor shall make his own arrangements for water, electricity, sewerage and other amenities.

On completion of the work, all temporary structures must be removed by the contractor with the approval of the Engineer and the land brought to its original condition on completion of work. The contractor shall be held responsible for any damage to the surroundings including both government and private properties.

- **17.0 Royalty:** The contractor shall take into account royalty, if any, leviable at any time during execution of the work by the local authority for stores/boulders and aggregates/gravels obtained from local quarry or river bed and no reimbursement shall be entertained on this account.
- **18.0 Lighting:** The contractor shall make his own arrangements for lighting of his colony and the work site. He shall not be entitled to any claim/payment whatsoever on this account.
- **19.0** Any other Terms and Condition other than written in this Tender document shall not be considered.

Sd/-Project Manager, JPO-SKSKI, Biratnagar, Nepal

## Nepal – India Joint Project Office (Government of Nepal & Government of India) Sapta Kosi Sun Kosi Investigation (JPO-SKSKI)

### **Schedule of Quantities & Rates**

Name of Work: Diamond Core Drilling for Geo-technical Investigation at Dam Axis Site of Sapta Kosi Multipurpose Project, near Barahakshetra, Dhankuta, Nepal

### (Package-A)

SL. No.	Item	Estimated Quantity	Unit	Rate / unit in NRs. (in Figures and Words)	Amount in NRs. (In Figures)
	Drilling in River Bed Through Floating Platform				
1.	Construction of Suitable Floating Platform in the River and its anchoring and setting of drill rig for diamond core drilling in river bed complete as per specification and directions of Engineer-in-Charge (E-I-C) including cost of all materials, labour, POL etc.	1	Nos.		
2.	Carrying out of Vertical Diamond Core Drilling in River Bed formations & locations including supplying of core boxes, preservation of cores in core boxes of standard dimensions, their marking & taking color photographs of the preserved cores etc. complete with cost of labour, T&P & POL as per directions of Engineer-in-Charge. The Mobilization				

	& Demobilization of all equipment like drilling machine and other accessories to site and shifting of Floating Platform and drill rig from one drill hole location to another drill hole location including construction and maintenance of access path required, if any, shall be included in the rate of per meter drilling.) (Total 03 Holes)  I. In Overburden Soil and Sandy Strata Mixed with Boulders up to			
	25 m Depth	30	m	
	II. In Rock (up to 100 m Depth)	290	m	
	III. In Rock (100 m to 200 m Depth)	100	m	
	Drilling at Abutments & River Bank			
3.	Construction of Platform and setting of drill rig for diamond core drilling including cost of all materials, labour, POL etc. specification and directions of E-I-C.	5	Nos.	
4.	Carrying out of Vertical Diamond Core Drilling in different formations & locations including supplying of core boxes, preservation of cores in core boxes of standard dimensions, their marking & taking color photographs of the preserved cores etc. complete with cost of labour, T&P & POL as per directions of Engineer-in-Charge. The Mobilization & Demobilization of all equipment like drilling machine and other accessories to site and shifting of drill rig from one drill hole location to another drill hole location including construction and maintenance of access path required, if any, must be included in the rate of per meter drilling.) (Total 04 Holes)  (i) In Overburden Soil and Sandy Strata Mixed with Boulders up to 25 m Depth	40	m	
	(ii) In Rock (up to 100 m Depth)	250	m	
	(iii In Rock (100 m to 200 m Depth)	90		

	Carrying out of Angular Diamond Core Drilling in different formations & locations including supplying of core boxes, preservation of cores in			
5.	core boxes of standard dimensions, their marking & taking color photographs of the preserved cores etc. complete with cost of labour, T&P & POL as per directions of Engineer-in-Charge. The Mobilization & Demobilization of all equipment like drilling machine and other accessories to site and shifting of drill rig from one drill hole location to another drill hole location including construction and maintenance of access path required, if any, must be included in the rate of per meter drilling.) (Total 01 Holes)			
	I. In Overburden Soil and Sandy Strata Mixed with Boulders up to 25 m Depth	10	m	
	II. In Rock (up to 100 m Depth)	100	m	
	III. In Rock (100 m to 200 m Depth)	40	m	
	Permeability Tests			
6.	Water Permeability Tests at various depths inside Drill hole in accordance with specification and as per BIS code Double/Single packer as per direction of Engineer-in-Charge.	280	Nos.	
	Grand Total			
	(GT in Words)		1	

Notes: - All rates and amounts shall be quoted both in Figures and Words. Evaluation of Tender shall be done as a package. I if any, may be quoted separately. Evaluation of Tender will be done excluding Taxes.

### Nepal – India Joint Project Office (Government of Nepal & Government of India) Sapta Kosi Sun Kosi Investigation (JPO-SKSKI)

### **BRIEF DESCRIPTION OF PROJECT**

Sapta Kosi Multipurpose Project (SKMP) on Sapta Kosi River, near Barahkshetra, Dist Sunsari in Nepal is being investigated jointly by Government of Nepal and Government of India for the preparation of Detailed Project Report (DPR) of the aforesaid project. Joint Project Office Sapta Kosi Sun Kosi Investigation (JPO-SKSKI), a joint project office of Government of Nepal and Government of India has been assigned the responsibility for carrying out the necessary topographical surveys, field investigations and other studies on behalf of both the Governments and prepare the DPR.

The present work of Diamond Core Drilling is proposed to be carried out at Dam Axis of Sapta Kosi Multipurpose Project on Sapta Kosi River about 1.6 km u/s of Barahkshetra, Nepal.

### 1.0 Project Location:

The Sapta Kosi Multipurpose Project is located near Sacred Temple of Barahkshetra in Sunsari District of Nepal on Sapta Kosi River, about 40 km upstream of existing Hanuman Nagar Barrage where the river enters into India. The location of the Project Area is shown in Plate–I: Index Map.

### 2.0 Access to Project Site & Site Conditions:

The **Sapta Kosi Multipurpose Project** is located at a distance of 11 km from Chatra village of Sunsari district, Nepal. Chatara is located about 20 km from Dharan and Dharan is located about 40 km from Biratnagar. The road from Dharan to Chatra is metalled/semi-metalled. The Barahkshetra is connected by metalled/semi-metalled road from Chatara.

The dam site is located at a distance of about 1.6 km from Barahkshetra on river Sapta Kosi and can be reach by a foot track located on left bank or through river by boat/steamer.

The plant & machinery and other material may have to be transported to the work site on head load from the suitable point on foot track after crossing the suspension bridge near Barahkshetra temple. Contractor may have to construct the necessary approach path from suitable point on existing foot track to actual work site for the movement of men & machinery.

The details of the places of importance in the vicinity of the project along with road distances from Biratnagar are as under:

SI. No.	Place	Importance	Distance from Biratnagar (Approx.)
1.	Biratnagar (Nepal)	Industrial Town of Nepal	0.0 km
2.	Jogbani (India)	A Town on Indo-Nepal Border & Custom Check Post and Rail Head (Katihar - Jogbani Section)	8.0 km
3.	Katihar (India)	One of the Divisional Head Quarters of North East Frontier Railway in Bihar, India.	120.0 km
4.	Dharan (Nepal)	Important place of Kosi Zone, Nepal	40 km
5.	Chatara (Nepal)	Govt. of Nepal's existing Irrigation Project Site	55 km

Nearest border point for access to site from India is Jogbani, District Araria (Bihar). The project can also be easily accessed from India through following border points which are located on East – West Highway of Nepal:

- (a) Kakarbhitta, near Siliguri in West Bengal: 250 km from Mirchaiya;
- (b) Birguni near Raxual in Bihar: 170 km from Mirchaiya;
- (c) Bhantabari near Birpur in Bihar: 60 km from Mirchaiya.

Biratnagar is connected by Air from Kathmandu through domestic airlines. Kathmandu is connected from India by Air from Delhi & Kolkata.

### 3.0 Transport Facilities:

Regular private bus services are available up to Dharan from Biratnagar. Private buses also ply from Dharan to Chatra. There is no bus service from Chatra to Barhkshetra but private taxies/jeeps ply on this route from Dharan.

#### 4.0 Communication Facilities:

Presently, the work site does not have any communication facility. The nearest place having assured communication like ISD/STD and E-mail facilities is at Dharan, District - Sunsari (Nepal).

### 5.0 Climate:

The work site is located approximately in between 100 meters and 450 meters altitude above MSL. The site is in a narrow river gorge and both hot summers and chill winters are to be encountered.

### 6.0 Geological Information

Sapta Kosi Valley occupied by quartzite of Kosi series where as in the far east phyllites of Daling Group are exposed. These steep rocky slops are at places capped by 1-3 meter of overburden materials, which give indications of creep movement.

### Nepal – India Joint Project Office (Government of Nepal & Government of India) Sapta Kosi Sun Kosi Investigation (JPO-SKSKI)

### SCOPE OF WORK AND TECHNICAL SPECIFICATIONS

### 1.0 General:

- 1.1 All works covered in this contract shall be carried out in accordance with the detailed specifications herein after described. In case, the specifications of the work are not given herein, the work shall be carried out in all respects in accordance with relevant Bureau of Indian Standards (BIS) specifications, best engineering practices and the instructions of the Engineer-incharge given from time to time.
- 1.2 Assessment of Site Conditions: The contractor shall satisfy himself as to the nature and the location of the work site as well as terrain and local conditions and particularly those having bearing on handling & storage of equipment and materials, availability of labour and working space, weather conditions or other similar physical conditions at the site, sub-soil water, subsurface material to be encountered, the characteristics of equipment and facilities needed, particularly during the execution of work and all other matters which may, in any way, affect the work or the cost thereof under this contract.

Any default or failure on the part of contractor to acquaint him with all the information concerning site conditions shall not relieve him from the responsibility for the execution of the contract unless the contract expressively provides that responsibility thereof is to be assumed by the Employer.

1.3 The information and data stated herein and incorporated in the Tender documents elsewhere is for information only and the Employer does not guarantee that the available data/records represent completely and accurately the existing site conditions and does not guarantee correctness of any information and interpretation there from. The contractor shall assume full responsibility for any deductions, interpretations and conclusions drawn there from by him.

### 2.0 Scope of Work:

- 2.1 Carrying out Diamond Core Drilling at about 08 nos. of drill hole in different locations as shown in the drawing at **Plate-II**. The drilling is required to be carried out at the different Components as detailed below.
  - i) 08 Holes at Dam Axis site area including 1 hole at At TRT Major Bend for finding extension of Sonakhumbi Shear and rock mass condition (1.6 Kilometer up stream of Barahkshetra)

950 m

Total **950 m** 

All drill holes will be of size NQ/NX. In all drill holes, the permeability tests as per the direction of Engineer shall be carried out by the contractor.

The number of drill holes and their depth specified for are approximate and liable to change during execution based on the findings of drilling carried out and recommendations of Geologists. The contractor shall carry out all such additional drilling at his quoted rates.

- 2.2 Tentative Locations of Drill Holes: The tentative locations of drill holes are shown in Plate-II. The Engineer in charge shall be entitled to make any change in the location of holes, number of holes to be drilled, the quantity of drilling in each hole and number of tests to be preformed in each hole as per the geological conditions revealed during drilling and recommendation of Geologist.
- 2.3 Mobilization: The Contractor shall move drilling equipment with all accessories and other required material to the work site, set up the drilling equipment and start the drilling operation within the period of mobilization of 30 days allowed after issue of 'Letter of Intent' for commencement of work. In case of Indian Agency, the mobilization period of 30 days shall be reckoned from the date of making available the Customs Exemption Certificate from Government of Nepal by the Project Manager, JPO-SKSKI, Biratnagar, Nepal.

The contractor shall be required to mobilize at least two set of drilling rigs with all accessories and drilling crew at sites independently. The mobilization shall be considered complete only when the contractor has mobilized both these drill rigs, necessary crews and materials and has started drilling with these drilling rigs. In case, mobilization as above is not completed in

- scheduled commencement date, the contractor shall be liable to pay compensation, as deem fit, for non-starting of the work in prescribed time limit.
- 2.4 Set-Up: The setting up a drilling rig at each drill hole location shall include surveying the location, clearing of bush, leveling of work area and construction of access path and platform, making necessary arrangements for sufficient drilling water, moving the drilling equipment from one site to another and moving the same equipment from one hole to another.
- 2.5 Platform: Platforms, rigid on natural ground for abutment drill holes and floating for river bed drill holes, of suitable size and adequate strength & capacity shall be constructed by the contractor for setting up the drill rig, its accessories and having sufficient provision for manpower and supervisory staff to carry out drilling. The drill platforms shall be properly leveled and shall have adequate provision for stacking of equipment, accessories and core boxes etc. The platforms shall also have adequate working space for workmen and their movements during the drilling operation.
- 2.5.1 Floating Platform: Floating Platform of suitable size & adequate capacity shall be constructed by the contractor for setting up the drill rig, its accessories including manpower and supervisory staff to carry out river bed drilling. The contractor shall submit the drawing of floating platform to Engineer for his approval before undertaking the construction. The approval of Engineer shall not relieve the contractor of his responsibility of adequacy & safety of floating platform and he shall be solely responsible for the same. In addition, contractor shall arrange for, atleast, one boat for ferrying the drilling crew, labours & supervisory staff of JPO-SKSKI & its consultants from riverbank to drilling location. Life Jackets and Life Buoy shall also be arranged by contractor. The rates to be quoted shall be inclusive of above provisions.
- **2.6** During the drilling operations, the contractor shall conduct the permeability test as directed by Engineer.
- 2.7 Date of Completion: The work shall be completed in all respects including clearance of site within stipulated period of completion specified in Schedule-F. Upon completion, the contractor shall intimate the Engineer in writing about the date of completion of work. The Engineer shall inspect the work and the contractor shall rectify all defects, omissions etc pointed out by the Engineer to the contractor at the time of inspection. The contractor will get these defects and omissions rectified and notify the same to the Engineer within 10 days of receipt of such notice from the Engineer and in case the remedial operations are found to the satisfaction

of the Engineer, the work shall be taken over by him and thereafter the certificate of completion shall be issued by the Engineer under his signatures. The date of completion will be reckoned from the date on which the completion certificate is issued by the Engineer.

- 2.8 Possession Prior to Completion: The Engineer shall have the right to the possession of or use any completed part of work or work under construction either temporarily or permanently. Such possession or use shall not be deemed as an acceptance of any work either completed or not completed in accordance with the contract, except where expressed or otherwise specified by the Engineer, within the extent of clause.
- **2.9 Demobilization:** Demobilization includes the removal of the contractor's plant & equipment and all accessories including waste materials from the site and restoration of the site to its original condition.
- **3.0 Indian Standard Codes:** The work under this specification shall, in general, be carried out in accordance with following Indian Standards published by Bureau of Indian Standards as existing one month prior to date of submission of Tender:

SI. No.	IS Code No.	Title
1.	IS:4078:	Code of Practice for indexing and storage of drill cores.
2.	IS:4464:	Code of practice for presentation of drilling information and core description in foundation investigation.
3.	IS:5313:	Guide for core drilling observation.
4.	IS:5529:	Code of practice for in-situ permeability tests:
	(Part-1 & Part-2)	Part-1: Test in over burden.
		Part-2: Test in Bedrock.
5.	IS:6926:	Diamond Core Drilling for site investigation for river valley projects – Code of practice.
6.	IS:6955:	Code of practice for subsurface exploration for earth & rock-fill dams.
7.	IS:10386: (Part-1to 10)	Safety codes for construction, operation and maintenance of river valley projects.
8.	IS:9401: (Part- 15/Section-1)	Method of measurement of works in river valley projects (Dams and appurtenant structures): Part-15: Investigation works: Section-1: Bore Hole drilling.

- **4.0 Programme of Work:** Immediately after award of work but within mobilization period, the contractor shall submit the methodology as well as Programme of execution of work to the Project Manager, JPO-SKSKI, Biratnagar, Nepal with a copy to the Engineer and get it approved from him and strictly adhere to it for the timely completion of the work.
- 5.0 Size of Drill Holes: The drill hole shall be of NQ/NX size. However, under unavoidable circumstances the Engineer in consultation with the Project Manager, JPO-SKSKI; Biratnagar shall be competent to decrease the size of the hole after satisfying himself of the technical difficulties.

### 6.0 Method of Drilling:

- 6.1 Diamond Core drilling shall be carried out using double tube / triple tube core barrels for obtaining maximum core recovery in overburden strata. It is expected that contractor shall give minimum 80% core recovery in over burden strata and nearly 95-100% core recovery in rocky strata. However, requirement of core recovery can be reviewed by the Engineer in consultation with Geologist and the Project Manager, JPO-SKSKI, Biratnagar considering the site conditions.
- **Size of Casing:** Casing, if used, shall be of such size as to permit coring with NQ/NX size core barrel throughout the drill hole.
- 6.3 Clear water shall be used as the drilling fluid in rock drilling for the removal of cuttings.
- 6.4 The drill hole shall be inclined or vertical as specified in the 'Schedule of Quantities & Rates'. However, inclination in vertical holes may be permitted by Engineer in consultation with Geologist and Designers under special circumstances.
- 6.5 The contractor shall maintain the record of the drilling process in the Daily Drill Report Form as prescribed by the Engineer.
- 6.6 Drill hole shall be drilled by contractor up to its specified depth or as directed by Engineer. If contractor fails to drill any hole at a particular location upto its pre-specified depth because of any reasons, the hole can be abandoned by Engineer on the request of contractor for termination of that hole. In that case, the contractor shall be required to re-drill another hole at another location, free of cost up to the depth of the abandoned hole and thereafter at quoted rates upto specified depth or as directed by the Engineer. However, if any hole is abandoned by Engineer due to technical reasons like geological surprises and contractor is directed to drill another hole at a different location,

payment shall be made for new drill hole at the specified rate as agreed to in contract.

6.7 The drilling work shall be executed at critical hydraulic and water pressures so as to minimize chances of crushing of core due to excessive hydraulic pressure or water pressure. None of the pulls shall exceed the effective length of the core barrel in use.

### 7.0 Maintenance of Cores in Core Boxes:

- 7.1 The core obtained after each pull shall be properly placed in the wooden core-boxes, which shall be provided by the Contractor free of cost. Core losses shall be replaced in each run by the core loss blocks equal in length to the core loss. Soft or friable portions of core such as badly weathered and decomposed zone or joint fillings or other soil like zones, shall be preserved by wrapping in plastic. After placement in core box, the core shall be photographed in Colour prints. Core boxes shall be made of seasoned wood. The size of the core boxes shall be of 4.5'x1'x0.5'. It shall be provided with steel handle at both ends and locking arrangement.
- 7.2 The core boxes shall be properly marked on their cover for the hole number awarded by the Engineer or his authorized representative, it's ground level and collar elevation, the covered depth related to the core box, box number etc. The core box with cores shall be properly stored and transported to Project Site Office as directed by the Engineer or his authorized representative.
- **7.3** Wooden stoppers indicating the depth shall be placed after placement of core obtained from each pull.
- 8.0 Permeability Tests: Permeability tests, as per BIS Code No. IS: 5529 (Part-1 & Part-2), using suitable mechanical or pneumatic packers shall be conducted in each borehole normally at 3.0 to 5.0-meter intervals as directed by the Engineer or his authorized representative. Only clear water shall be used for conducting permeability tests. Use of drilling mud or other substances that may affect the permeability of the rock shall not be permitted in these holes. The packer used shall be of single/double type as per decision of the Engineer.
- 8.1 The test pressures for each section shall be changed in five steps. Prior to starting the test, three pressures gauge shall be selected, minimum, maximum and intermediate. Flow rate of injecting water shall be observed under each step of the pressure for 10 minutes after the flow rate becomes stable and shall be recorded at every minute.

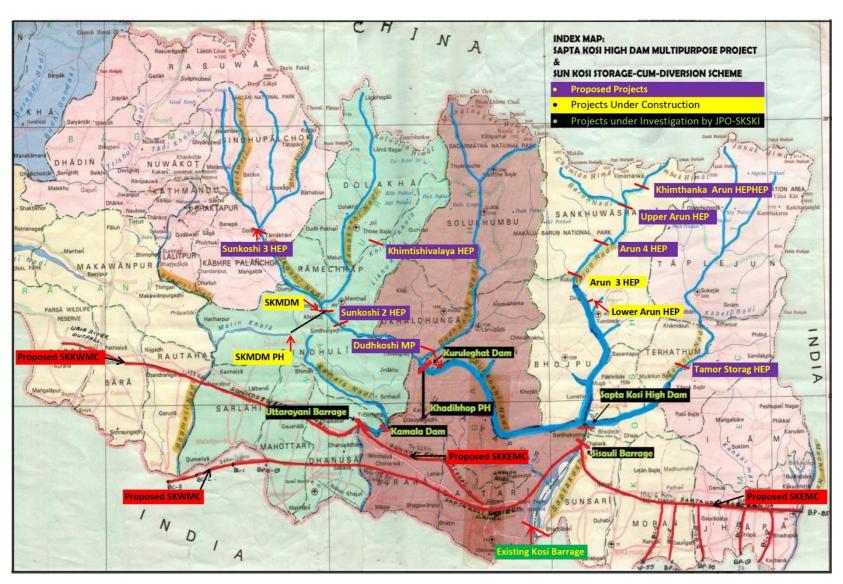
**8.2** All tests shall be conducted in the presence of the authorised representative of the Engineer and the records of the water tests shall be maintained in the proforma prescribed by the Engineer.

### 9.0 Measurement & Payments:

- **9.1** The rates to be quoted shall reflect the element of basic price as well as taxes and duties, if any.
- **9.2** The rates of drilling work shall be inclusive of the supply of core boxes, transportation of core boxes to the Project Stores to be intimated by the Engineer, photography of cores, maintenance of cores in core boxes as prescribed in Clause 7.0 above and consumable items such as POL, diamond bit etc. required for the drilling operations.
- 9.3 The ground elevation of the drill hole shall be determined by the authorised representative of the Engineer after construction of the drilling platform. The depth of drilling shall be computed from the ground elevation, which shall be considered as 'Zero' for measurement. The height of the collar from the ground shall also be recorded. The logging of core obtained shall be done in accordance with the collar level of the highest casing pipe. In river bed, the actual depth of drilling shall be measured from the collar elevation after deducting the water depth in the river.
- 9.4 Contractor shall not be paid for the mobilization & demobilization of all equipment like drilling machine and other accessories to site and shifting of floating platform and drill rig from one drill hole location to another drill hole location including construction and maintenance of access path. The rate for same shall be included in the rate quoted of per meter drilling.
- **9.5** Charges for providing Drilling Machine and Pump alongwith all accessories, POL, drilling crew, labors etc for the tests other than permeability tests to be conducted by another agency to be appointed by the Engineer, shall be measured in number of days for which plant & machinery is utilized by the agency appointed by Engineer for conducting these tests.
- **9.6** Any type of strata may be encountered during drilling. The entire work has to be executed on the agreed rates in the contract.
- **9.7** The rates quoted by the contractor shall remain firm during the execution of entire work and shall deem to have incorporated fluctuations in the cost of labour, equipment, materials and Petroleum, Oil and Lubricant (POL) etc required for the work.

- **9.8** The prices to be quoted by the Tenders shall be for the same unit as indicated in the 'Schedule of Quantities & Rates'.
- **9.9** No Income tax shall be deducted at source from the bills of the contractor. This would be the liability of the contractor.
- **9.10** Running bill shall be entertained fortnightly against actual depth of drilling completed and measured by Engineer and accepted by agency.

**Plate-I: Index Map showing Location of SKMP site** 



### Schematic Road links to SKSKI Projects

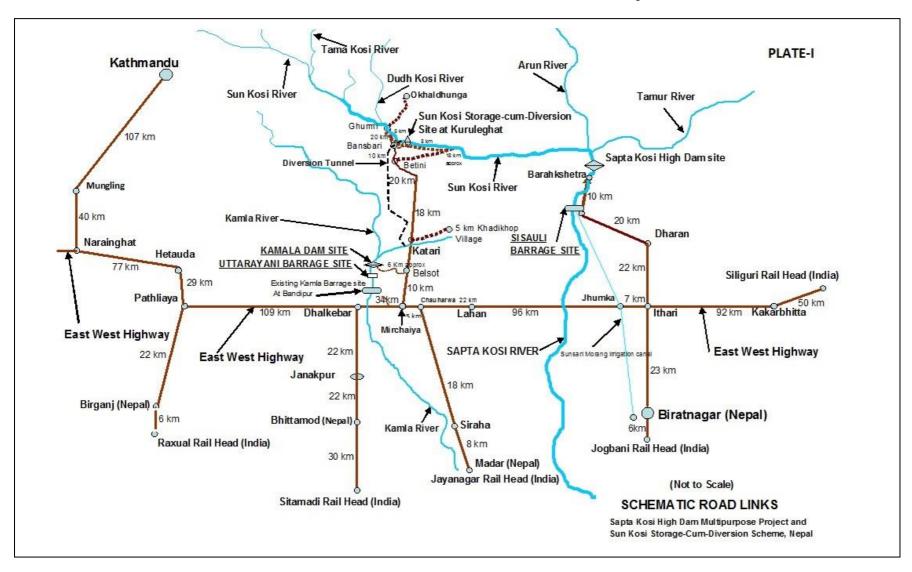
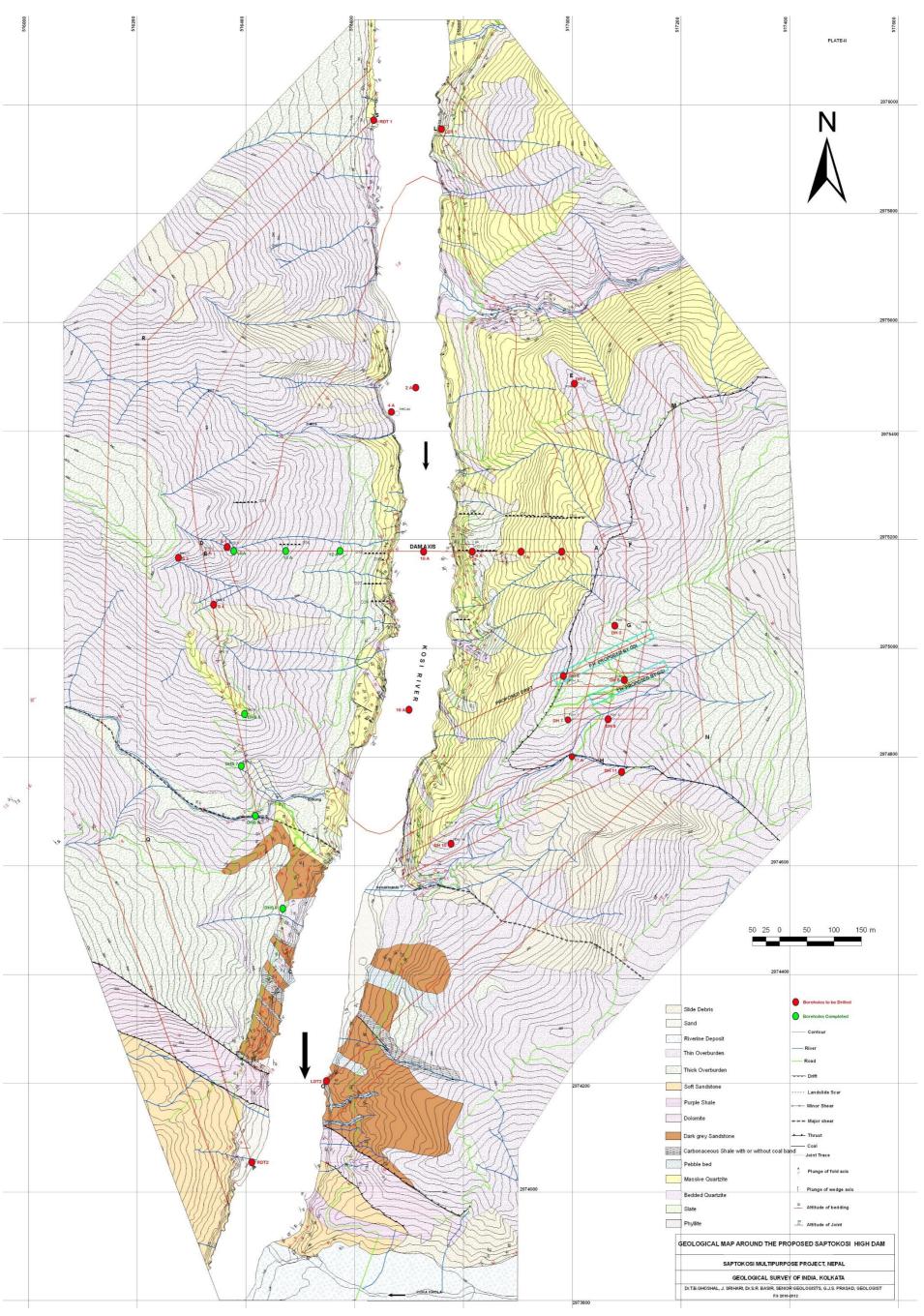


Plate-II: Geological Map Showing Drilling Details of SKMP



### **Table: Details of Drilling Locations at Dam Axis Site of SKMP**

S. No.	Hole No	Depth (m)	Inclination	Latitude	Longitude	Collar Elevation (EL-m)	Remarks
1	2A	160	Vertical	26 <sup>0</sup> 54' 04'' N	87 <sup>0</sup> 10' 06'' E	105.00	River centre hole 300 m upstream of dam axis
2	4A	150	Inclined 60° w.r.t horizontal	26 <sup>0</sup> 54' 02'' N	87º 10' 04'' E	110.00	Right bank, 250 m upstream of dam axis
3	6A	30	Vertical	26 <sup>0</sup> 53' 54'' N	87 <sup>0</sup> 10' 16'' E	345.00	On left abutment of dam axis
4	7A	50	Vertical	26 <sup>0</sup> 53' 54" N	87 <sup>0</sup> 10' 14'' E	260.00	On left abutment of dam axis
5	8A	100	Vertical	26 <sup>0</sup> 53' 54'' N	87º 10' 10'' E	180.00	On left abutment of dam axis
6	10A	160	Vertical	26 <sup>0</sup> 53' 54'' N	87 <sup>0</sup> 10' 07'' E	105.00	River centre hole at dam axis
7	16A	100	Vertical	26 <sup>0</sup> 53' 54" N	87 <sup>0</sup> 10' 00'' E	180.00	River centre hole 300 m downstream of dam axis
8	17A	200	Vertical	26 <sup>0</sup> 53' 44'' N	87º 10' 16'' E	320.00	At TRT Major Bend for finding extension of Sonakhumbi Shear and rock mass condition