THE CONTRACT

CONTRACT

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PART C1: AGREEMENTS AND CONTRACT DATA

C 1.1 FORM OF OFFER AND ACCEPTANCE

C1.1.1 FORM OF OFFER

The Client, identified in the acceptance signature block, has solicited offers to enter a contract for the procurement of consulting engineering services as follows:

CONTRACT NUMBER**: ZNB02212/00000/00/HOD/INF/23/T**
PROJECT NAME: **PROFESSIONAL ENGINEERING CONSULTING SERVICES FOR THE UPGRADE OF MAIN ROAD 75 (P75/2 FROM KM 5.00 TO KM 20.437 AND P75/3 FROM KM 0.00 TO KM 5.43) IN THE UGU DISTRICT UNDER THE DURBAN REGION**
The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the tender schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorized, signing this part of this form of offer and acceptance, the tenderer offers to perform all of the obligations and liabilities of the Consulting Engineer under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the conditions of contract identified in the contract data.

THE OFFERED TOTAL OF THE PRICE FOR THE SERVICES INCLUSIVE OF VALUE ADDED TAX IS (CONTRACT PRICE)

Rand (in words); .....

.....

.....

R.....(in figures)

TIME FOR COMPLETION OF THE SERVICES (REFER TABLE 3.1.9)

The date for commencement of the services will be the date of acceptance of this offer, or as stated in Part C.1.2.2.1 (h).	
The time for completion of the services will be stated by the client in Part C.3.3 of this Agreement. If the time is not stated in Part C.3.3 the tenderer is to state the time required for completion of the services below	
Stage 1: Inception (weeks)	
Stage 2: Concept and Viability (weeks)	
Stage 3: Design Development (weeks)	
Stage 4: Documentation and Procurement (weeks)	
Stage 5: Contract Administration and Inspection (weeks)	
Stage 6: Handover-Report (weeks)	
Stage 7: Close-out Report (weeks)	

This offer may be accepted by the Client by signing the acceptance part of this form of offer and acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the tender data, whereupon the tenderer becomes the party named as the Consulting Engineer in the conditions of contract identified in the contract data.

For the Tenderer:

Signature(s)..... ....

Name(s)..... ....

Capacity for the tenderer..... ....

....

For the Tendering Organisation:

Name.....

Address: ....

.....

Telephone number: ..... E-mail: .....

Witness:

Signature: .....

Name: (in capitals) .....

Date: .....

[Failure of a Tenderer to sign this form will invalidate the tender]

This form is to be completed by the Client only

C1.1.2. FORM OF ACCEPTANCE

By signing this part of the Form of Offer and Acceptance, the Client, identified below, accepts the Tenderer's Offer. In consideration thereof, the Client shall pay the Consulting Engineer the amount due in accordance with the Conditions of Contract identified in the Contract Data. Acceptance of the Tenderer's Offer shall form an agreement between the Client and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract, that is the subject of this Agreement.

The terms of the contract are contained in:
Part C1 Agreements and Contract Data (which includes this Agreement)
Part C2 Pricing Data
Part C3 Scope of Work
Part C4 Measurement and Payments
Part C5 CIDB Contract Skills Development Goals (CSDG)
Part C6 Site Information

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C6 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules as well as any changes to the terms of the Offer agreed by the Tenderer and the Client during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representatives of both parties.

The Tenderer shall within two weeks after receiving a completed copy of this Agreement, including the Schedule of Deviations (if any), contact the Client's Representative (whose details are given in the Contract Data to arrange the delivery of any documentation to be provided in terms of the conditions of contract identified in the contract data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the Tenderer receives written confirmation from the Client that the tender is accepted. Unless the tenderer (now consulting engineer), within five (5) working days of the date of such receipt, notifies the client in writing of any reason why he/she cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.

Signature of authorised Client Representative……

Name: *(in capitals)* ……...

Capacity: ..... ……..

Name of Client: *(organisation)*…….....

Address: .....

Witness: Signature: ..... **Name:** *(in capitals)* .....
Date: .....

This form is to be completed by the Client and the successful tenderer only, upon acceptance of the successful tenderer's offer

C1.1.3: SCHEDULE OF DEVIATIONS

The extent of deviations from the tender documents issued by the Client prior to the tender closing date is limited to those permitted in terms of the Tender Data and the Conditions of Tender.

A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of agreement reached during the process of offer and acceptance, the outcome of such agreement shall be recorded here.

Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.

Any change or addition to the tender documents arising from the above agreement and recorded here shall also be incorporated into the final draft of the Contract.

1 Subject: .....

Details: .....

2 Subject: .....

Details: .....

3 Subject: .....

Details: .....

4 Subject: .....

Details: .....

5 Subject: .....

Details: .....

Note: Additional items may be added in the same format and stapled to this page.

By the duly authorised representatives signing this Schedule of Deviations, the Client and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Client during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

FOR THE TENDERER:

Signature: .....

Name: ....

Capacity: .....

Tenderer: *(Name and address of organisation)* ....

Witness:
Signature: .....

Name:

Date: .....

FOR THE CLIENT:

Signature: .....

Name: ....

Capacity: .....

Client: *(Name and address of organisation)*..... ....

Witness:
Signature: .....

Name:

Date: .....

C1.1.4 TAX COMPLIANCE PERMISSION DECLARATION

The Consulting Engineer shall complete the declaration below.

I, ... (name)
the undersigned in my capacity as ..... (position)
on behalf of ..... (name of company)
herewith grant consent that SARS may disclose to the KZN Department of Transport Provincial Government our tax compliance status on an ongoing basis for the contract term.

For this purpose, our unique security personal identification number (PIN) is .....

In addition, the Consulting Engineer shall obtain written consent from each of its sub-contractors, undisclosed principals and partners involved in this contract confirming that SARS may, on an ongoing basis during the contract term disclose the sub-contractors' tax compliance status to the Client. For this purpose, the Consulting Engineer shall provide the Client with the unique security personal identification number (PIN) for each of its sub-contractors, undisclosed principals and partners involved in this contract.

In the event of a joint venture or Targeted Enterprise each member shall comply with the above requirement.

....
SIGNATURE **DATE**

C1.2 CONTRACT DATA

C1.2.1 CONDITIONS OF CONTRACT

The Conditions of Contract which shall be utilised is the Standard Professional Services Contract (July 2009) published by the Construction Industry Development Board.

In this document the word "***Consultant***" has been replaced with "***Consulting Engineer***". The word "***Employer***" (and all its derivatives) is replaced by the word "***Client***", except where reference is being made to the term *Employers Agent* and *Employer's Agent Representative* as per the provisions of the General Conditions of Contract (GCC), 2015.

C1.2.2 DATA PROVIDED BY THE EMPLOYER

Clause	Data
1	The Client is the **KwaZulu Natal Department of Transport** Address: **172 Burger Street, Pietermaritzburg 3201** Telephone:**033 355 8600**
	The authorised and designated representative of the Client is: Name**: Ms S. L Zulu**
	The address of receipt of communication is: Address: **172 Burger Street, Pietermaritzburg 3201** Faximile: 033 342 3962 E-mail: Sihle.Mhlongo@kzntransport.gov.za Telephone:033 355 0577
	The contract is for the provision of consulting engineering services for **The Upgrade of Main Road 75 (P75/2 from km 5.00 to km 20.437 and P75/3 from km 0.00 to km 5.43) in the Durban Region**
	The Period of Performance is 54 **Months plus defect liability period (12 Months).**
	The Start Date **will be date of the last party signing this agreement and terminate 12 months plus defect liability period (12 Months) thereafter.**
3.4.1	Communication by e-mail / facsimile is not permitted.
3.5	The location for the performance of the Project is along **Main Road 75 (P75/2 from km 5.00 to km 20.437 and P75/3 from km 0.00 to km 5.43) in the Durban Region**
3.6	The Consulting Engineer may not release public or media statements or publish material related to the Services or Project under any circumstances.
3.9.2	The time-based fees used to determine changes to the Contract Price are as stated in the Pricing Data
3.12.1	The penalty payable is R 10 000.00 per day subject to a maximum amount of R 3 600 000.00
3.15.1	The programme shall be submitted within 7 Days of the award of the contract.

Clause	Data
3.15.2	The Consulting Engineer shall update the programme at intervals not exceeding 12 Weeks.
4.3.1(d)	The Consulting Engineer is required to assist in the obtaining of approvals, licences and permits from the state, regional and municipal authorities having jurisdiction over the Project.
5.4.1	The Consulting Engineer is required to provide professional indemnity cover as set out in the Professional Indemnity Schedule.
5.4.1	The Consulting Engineer is required to provide the following insurances: 1. Insurance against Professional Indemnity Cover is: Three (3) times the value of the tendered final offer for normal services, excluding disbursements, VAT and Contingencies. Period of cover: Duration of Contract inclusive of the duration of the Design Period as agreed upon during the Design Development Stage. 2. Insurance against: Third Party Indemnity Cover is: R10 000 000-00 Period of cover: Duration of Contract 3. Insurance against: General Public Indemnity Cover is: R10 000 000-00
5.5	The Consulting Engineer is required to obtain the Client's prior approval in writing before taking any of the following actions: 1. Appointment of sub-contractors for the performance of services 2. Appointing Key Persons not listed by name in the Contract Data 3. Any other work not as specified in the Scope of Works
7.2	The Consulting Engineer is required to provide personnel in accordance with the provisions of Clause 7.2.1 to Clause 7.2.4 and to complete the Personnel Schedule.
8.1	The Consulting Engineer is to commence the performance of the Services within 30 Days of date that the Contract becomes effective.
8.2.1	Unless terminated in terms of the Contract, or otherwise specified in the Contract Data, the contract shall be concluded when the 54 Months plus defect liability (12 Months) contract period has lapsed.
8.4.3(c)	The period of suspension under clause 8.5 is not to exceed 2 years.
9.1	Copyright of documents prepared for the Project shall be vested with the Client
11.1	A Service Provider may not subcontract any work which he has the skill and competency to perform, unless otherwise permitted in the Contract Data..
12.1	Interim settlement of disputes is to be by adjudication.
12.4	Final settlement is by arbitration.
12.3.3	The adjudicator is the person appointed by the Adjudicators Agreement bound in the Construction Industry Development Board's Adjudication Procedure.

Clause	Data
12.4.1	In the event that the parties fail to agree on an arbitrator, the arbitrator must be nominated by the Kwa-Zulu Natal Society of Advocates.
13.1.3	All persons in a joint venture or consortium shall carry a minimum professional indemnity insurance of three (3) times the value of the tendered final offer for normal services, excluding disbursements, VAT and Contingencies.
13.4	Neither the Client nor the Consulting Engineer is liable for any loss or damage resulting from any occurrence unless a claim is formally made within 3 months from the date of termination or completion of the Contract.
13.6	The provisions of 13.6 do not apply to the Contract
15	The interest rate will be prime overdraft rate plus 2% per annum compounded monthly and calculated from the due date of payment.
	The additional conditions of Contract are as sated in the Scope of Works and Pricing Data.

C1.2.3 DATA PROVIDED BY THE CONSULTING ENGINEER

<table>
<tr><th>Clause</th><th></th></tr>
<tr><td>1</td><td>The Consulting Engineer is:

Address:

Telephone:

Faxsimile:

E-mail:</td></tr>
<tr><td rowspan="2">5.3</td><td>The authorised and designated representative of the Consulting Engineer is:
Name:</td></tr>
<tr><td>The address of receipt of communication is:
Address:

Telephone:

Faxsimile:

E-mail:</td></tr>
<tr><td>5.5</td><td>The Key Persons and their jobs / functions in relation to the services are:
<table>
<tr><th>Name</th><th>Specific Duties</th></tr>
<tr><td></td><td></td></tr>
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C1.3 AGREEMENT IN TERMS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, 1993 (ACT NO. 85 OF 1993)

THIS AGREEMENT is made between The Province of KwaZulu-Natal represented by Head of Department: Department of Transport

(hereinafter called the CLIENT) of the one part, herein represented by:

m ....

in his capacity as: .....

AND: ....
(hereinafter called the CONSULTING ENGINEER) of the other part, herein represented by:

in his capacity as:
duly authorised to sign on behalf of the Consulting Engineer.

WHEREAS the CONSULTING ENGINEER is the Mandatary of the CLIENT in consequence of an agreement between the CONSULTING ENGINEER and the CLIENT in respect of:

CONTRACT NO. ZNB02212/00000/00/HOD/INF/23/T: THE UPGRADE OF DISTRICT ROAD P75 (P75/2 from km 5.00 to km 20.437 and P75/3 from km 0.00 to km 5.43) in the uGu District Under the Durban Region.

for the construction, completion and maintenance of the works;

AND WHEREAS the CLIENT and the CONSULTING ENGINEER have agreed to enter into an agreement in terms of the provisions of Section 37(2) of the Occupational Health and Safety Act No 85 of 1993, as amended by the Occupational Health and Safety Amendment Act No 181 of 1993 (hereinafter referred to as the ACT);

NOW THEREFORE the parties agree as follows:

1. The CONSULTING ENGINEER undertakes to acquaint the appropriate officials and employees of the CONSULTING ENGINEER with all relevant provisions of the ACT and the regulations promulgated in terms thereof.

2. The CONSULTING ENGINEER undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the CLIENT have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONSULTING ENGINEER, his officials and employees. The CONSULTING ENGINEER shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.

3. The CONSULTING ENGINEER hereby accepts sole liability for such due compliance with the relevant duties, obligations, prohibitions, arrangements and procedures, if any, imposed by the ACT and Regulations, and the CONSULTING ENGINEER expressly absolves the CLIENT from being obliged to comply with any of the aforesaid duties, obligations, prohibitions, arrangements and procedures in respect of the work included in the contract.

4. The CONSULTING ENGINEER agrees that any duly authorised officials of the CLIENT shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONSULTING ENGINEER has complied with his undertakings as more fully set out in paragraphs

1 and 2 above, which steps may include, but shall not be limited to, the right to inspect any appropriate site or premises occupied by the CONSULTING ENGINEER, or to take such steps the CLIENT may deem necessary to remedy the default of the CONSULTING ENGINEER at the cost of the CONSULTING ENGINEER.

5. The CONSULTING ENGINEER shall be obliged to report forthwith to the CLIENT any investigation, complaint or criminal charge which may arise as a consequence of the provisions of the ACT and Regulations, pursuant to work performed in terms of this agreement, and shall, on written demand, provide full details in writing of such investigation, complaint or criminal charge.

Thus signed at ..…….……...…….. for and on behalf of the **CLIENT**

on this the ……. day of ……...…… 20……

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: *1.*

2.

Thus signed at ……..…….. for and on behalf of the **CONSULTING ENGINEER**

on this the …….day of ……..…… 20……

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES*:* *1.*

2.

PART C2: PRICING DATA

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C2 PRICING DATA

C2.1 PRICING INSTRUCTIONS

C2.1.1 For the purposes of this Pricing Schedule, the following words shall have the meanings hereby assigned to them.

Unit: The unit of measurement for each item of work as defined in the Scope of Works.

Quantity: The number of units of work for each item.

Rate: The payment per unit of work for which the Consulting Engineer tenders to do the work.

Amount: The product of the quantity and the rate tendered for an item.

Provisional Sum: An amount allowed for in the Pricing Schedule, for which the quantity of work is not known.

Prime Cost: Is a specific type of Provisional Sum where payment is made on the production of invoices showing the cost price of the implementation or installation of the service required. Services rendered in this manner carry a cost for which a rate or a lump sum is offered at tender stage to cover all the tenderer's handling, supervision and liability costs in providing the item or services.

C2.1.2 The quantities provided by the Client in the Pricing Schedule are only approximate quantities. The quantities of work finally accepted and certified for payment, and not the quantities given in the Pricing Schedule, will be used to determine payments to the Consulting Engineer.
The validity of the Contract shall in no way be affected by differences between the quantities in the Pricing Schedule and the quantities finally certified for payment. Work is valued at the rates or lump sums tendered.

C2.1.3 Rates and lump sums shall include full compensation for overheads, profits, incidentals, tax (other than VAT), etc., and for the completed items of work as specified in the Scope of Works and Contract Data and for all the risks, obligations and responsibilities specified in the General Conditions of Contract, Particular or Special Conditions of Contract, except in so far as the quantities given in the Pricing Schedule are only approximate.

C2.1.4 The tenderer shall fill in a quantity or a rate or a lump sum for each item where provision is made. Items against which no rate or lump sum has been entered in the tender will not be paid for when the work is executed, as payment for such work will be regarded as being covered by other rates or lump sums in the pricing schedule.
The tenderer shall fill in a rate against all items where the words "rate only" appears in the amount column. Although no work is foreseen under such item and no quantities are consequently given in the quantity column, the tendered rate shall apply should work under this item actually be required. Tenders should note the provisions of clause C2.1.10 of this preamble.
The tendered lump sums and rates shall be valid irrespective of any change in the quantities during the execution of the contract.

C2.1.5 The short descriptions of the payment items in the Pricing Schedule are only given to identify the items and to provide specific details. Reference shall, inter alia, be made to the Contract Data, General Conditions of Contract and Particular/Special Conditions of Contract and Scope of Works for more detailed information regarding the extent of work entailed under each item.

C2.1.6 Where so indicated under measurement and payment, prices or rates will be subject to adjustment for escalation as provided for below:

- The prices or rates shall be fixed for the first 12-month period determined from the tender base date and no change during this period will be allowed for escalation.

- On the 12-month anniversary date of the Contract base date the rates or sums shall be adjusted by the 12-month year on year CPI index (as published in the monthly bulletin PO141. of Statistics South Africa under table B) and fixed at this value for the following 12-month period. Subsequent 12-month periods shall be dealt with on the same basis.
- Adjustment of lump sum prices for escalation shall only be applicable to that portion of the relevant Service which is incomplete at the end of the 12-month anniversary date and shall not be applicable to any progress payments already claimed.
- Adjustment for escalation shall only be applicable for services or portions thereof, that are still within the prescribed programme and any approved extensions of time.

C2.1.7 Interim payments for lump sum payment items may be permitted. Such interim payments shall however be limited to proven progress achieved for that service deliverable. The sum of any progress payments made under a particular lump sum payment item shall be deducted prior to calculating any adjustments for escalation as described in clause C2.1.6 above.

C2.1.8 Provisional and Prime Cost Sums: Each Sum shall only be used, in whole or in part, in accordance with the Client's instructions and the Contract Price shall be adjusted accordingly. The total sum paid to the Consulting Engineer shall include only such amounts, for the work, supplies or services to which the Sum relates, as the Client shall have instructed.

For each Sum, the Client may instruct equipment, materials or services to be procured by the Consulting Engineer in accordance with the Client's policies, and for which there shall be included in the Contract Price:

- The actual amounts paid (or due to be paid) by the Consulting Engineer under the Sum, and
- An item for compilation and printing of procurement documentation, quotation/tender process and evaluation, and all overhead charges and profit, tendered in the Pricing Schedule. Provided that for Prime Cost Sums only, where a percentage mark-up or lump sum mark-up is tendered, which shall exclude profit.

The Consulting Engineer shall produce all quotations, invoices, vouchers and accounts or receipts in substantiation of any claim under a Sum.

Any percentage adjustment or lump sum mark-up against the Sum for handling fee, profits, etc. shall not be negative.

C2.1.9. Subject to the conditions stated in Clause C2.1.10 below, the rates and lump sums filled in by the tenderer in the pricing schedule shall be final and binding with regard to submitting the tender and may not be adjusted should there be any mistakes in the extensions thereof and in the total sums appearing in the tender. Should there be any discrepancies between the tender sum and the correctly extended and totalled pricing schedule, the rates and the lump sums will be regarded as being correct, and the Client shall have the right to make adjustments to the tender sum to reconcile the tender sum with the total of the pricing schedule. In such an event the tenderer will be consulted but, failing agreement between the parties, the decision of the Client shall be final and binding. Adjustment of the tender sum will take place prior to the signing of the contract. In their own interest tenderers must make doubly sure of the correctness of their tendered rates and lump sums, the extensions and the tender sum.

C2.1.10 A tender shall be deemed non-responsive if the unit rates or lump sums for some of the items in the Pricing Schedule are, in the opinion of the Client, unreasonable or out of proportion, and if the tenderer fails, within a period of seven (7) days of having been notified in writing by the Client to adjust the unit rates or lump sums for such items, to make such adjustments.

C2.1.11 All rates and sums of money quoted in the Pricing Schedule shall be in South African Rand and whole cents.

C2.1.12 The item numbers appearing in the Pricing Schedule refer to the corresponding item numbers in the Scope of Work.

C2.1.13 The Standard for Contract Skills Development Goal (CSDG) which is elaborated in Part C5 CIDB CONTRACT SKILLS DEVELOPMENT GOALS (CSDG) of this contract and under the Standard for Developing Skills Through Infrastructure Contracts document published by the Construction Industry Development Board (CIDB) shall be implemented on this contract. The method of achieving the contract skills development goal is to be approved by the Client. The four methods are described in Part C5. For this contract, only Method 3 and Method 4 may be implemented.

The targeted hours for training are calculated as follows:

Hr = (CA ÷ 1 000 000) x 150

Where:

Hr is the hours required for Contract Skills Development Goal

CA is the contract amount which is the Contract Price (excluding value added tax)

CA = NS + CM

Where:

NS is the total sum for Normal Services Fees (excluding value added tax)

CM is the total sum for Contract Administration and Monitoring Fees (excluding value added tax)

Hr shall be multiplied by a value of **R86.00** to obtain the monetary allocation for CSDG on this contract. The value of R86.00 is the average hourly rate for the employment of candidates under Method 3 and Method 4.

In the event that the Consulting Engineer fails to substantiate reasons of not achieving the Contract Skills Development Goal (CSDG) to the Client, the Consulting Engineer will be charged a financial penalty calculated as follows:

P = 0.05 X [(Hr – Hr0) ÷ Hr] X CA

Where:

P is the monetary value of penalty payable

Hr is Targeted hours for CSDG

Hr0 is Achieved hours for CSDG

CA is the contract amount which is the Contract Price (excluding value added tax)

C2.2 PRICING SCHEDULE

The pricing schedule refers to the latest ECSA guidelines.

Note: *The Amount under each ECSA stages will be paid upon completion and acceptance by the Client of each deliverable provided on that specific stage.*

- **PREAMBLE TO THE SCHEDULE OF PRICES**

1. The prices and rates to be inserted in the schedule of prices are to be the full inclusive prices for the work described under the several items. Such prices and rates shall cover all costs and expenses that may be required in and for the execution of the work described, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the documents on which the tender is based, as well as overhead charges and profit. Reasonable charges shall be inserted as these shall be used as a basis for assessment of payment for additional work that may have to be carried out.

2. A price or rate is to be entered against each item in the schedule of prices, whether the quantities are stated or not. An item against which no price is entered will be considered to be covered by the other prices or rates in the schedule.
3. Except where a rate only is required, the tendered price for each scheduled item is to be inserted in the "Amount" column. The total tendered price is to be inserted in the Summary of the schedule of prices.
4. Arithmetical errors in the schedule of prices will be corrected in accordance with Clause C3.9 of the Conditions of Tender.

The Tenderer shall price each item in the schedule of prices in **BLACK INK.**

NOTE: All payments by the Client to Consulting Engineers will be made in line with the KwaZulu Natal Department of transport Remuneration Policy Ref. T4/5/3/5 which may be amended from time to time by the Head of Department.

C2.2.1 SCHEDULE OF PRICES

Item	Description	Unit	Quantity	Rate	Amount (R)
1	**Normal Services Fee**				
(a)	Percentage Fee based on the cost of works for Road Upgrade which includes Design Development, Documentation and Procurement, Contract Administration, and Inspection and Close out.	%	R500 000 000.00		
	Normal Services Fee Breakdown as per ECSA STAGES				
	Initiation or Prefeasibility	%		5%	
	Concept or Feasibility	%		25%	
	Design Development	%		25%	
	Design Documentation	%		25%	
	Contract Administration	%		15%	
	Handover or Close Out	%		5%	
(b)	Percentage Fee based on the cost of works for Structure / Bridge which includes Inception, Concept and Viability, Design Development, Documentation and Procurement, Contract Administration, and Inspection and Close out.	%	R 100 000 000.00		
	Normal Services Fee Breakdown as per ECSA STAGES				
	Initiation or Prefeasibility	%		5%	
	Concept or Feasibility	%		25%	
	Design Development	%		30%	
	Design Documentation	%		10%	
	Contract Administration	%		25%	
	Handover or Close Out	%		5%	
TOTAL CARRIED FORWARD TO SUMMARY =					
NOTE TO COMPILER – (Number of Category D Staff is dependent on the envisage scope of works! The number must be amended accordingly)					
2	**Contract Administration and Monitoring**				
(a)	Office/Design Team				
	i) Project Lead (Category B)	Hour	1782		
	ii) Lead Design Engineer (Category C)	Hour	1080		
	iii) Project Engineer / Technician (Category D)	Hour	2268		
	Disbursement for Office Personnel				
(b)	(i) Travel Accommodation	Prov. sum	1	R 98 640.00	R98 640

	(ii) Mark-up on item 2 (b)(i) above for all overheads, charges and profit.	%	R98 640.00		
	Establishment of supervisory personnel on site				
(c)	Construction Monitoring team				
	i) Employers Agent Representative (Category C)	Month	54		
	ii) Site Engineer / Technician (Category D)	Month	54		
	iii) Site Engineer / Technician (Category D)	Month	54		
	Disbursements for Site Personnel				
(d)	(i) Living Accommodation and Meals	Prov. sum	1	R 2 752 056.00	R 2 752 056.00
(e)	(i) Travel Accommodation	Prov. sum	1	R 1 982 880.00	R 1 982 880.00
	(ii) Mark-up on the sum of item 2 (d) and (e) above for all overheads, charges, and profit.	%	R4 734 936.00		
TOTAL CARRIED FORWARD TO SUMMARY =					
3	**General Disbursements**				
(a)	Topographical Survey	Prov. sum	1	R 6 000 000.00	R 6 000 000.00
(b)	Geotechnical / Laboratory services	Prov. sum	1	R 9 000 000.00	R 9 000 000.00
(c)	Environmental Impact Assessment	Prov. sum	1	R 4 500 000.00	R 4 500 000.00
(d)	Health and Safety Consultant	Prov. sum	1	R 3 600 000.00	R 3 600 000.00
(e)	Land Expropriation Consultant	Prov. sum	1	R 1 500 000.00	R 1 500 000.00
(f)	Social Facilitation Services	Prov. sum	1	R 1 500 000.00	R 1 500 000.00
(g)	Dispute Settlement Services	Prov. sum	1	R 2 100 000.00	R 2 100 000.00
(h)	Targeted Training	Prov. sum	1	R 2 700 000.00	R 2 700 000.00
(i)	Project Liaison Committee + Committee Liaison Officer	Prov. sum	1	R 1 736 400.00	R 1 736 400.00
(j)	Property Evaluation and Reimbursement	Prov. sum	1	R 1 429 694.34	R 1 429 694.34
(k)	Traffic Impact Assessments	Prov. sum	1	R 2 100 000.00	R 2 100 000.00
(l)	Maintenance during defects liability Period	Prov. sum	1	R192 000.00	R192 000.00
(m)	Mark-up on sum of item 3 above for all overheads, charges and profit.	%	R36 358 094.34		
TOTAL CARRIED FORWARD TO SUMMARY =					
4	**CIDB Contract Skills Development Goals**				
(a)	Normal Services – Total Carried Forward to Summary			(NS)	R
(b)	Contract Administration and Monitoring – Total Carried Forward to Summary			(CM)	R

(c)	Contract Amount	CA = NS + CM	R
(d)	Targeted Hours for Training	Hr = (CA ÷ 1 000 000) x 150	Hours
(e)	**TOTAL CARRIED FORWARD TO SUMMARY =**	Hr x R86	R

C2.2.2 SUMMARY OF PRICING SCHEDULE

ITEM	DESCRIPTION	AMOUNT
1	Normal Services (Road + Structures)	
2	Contract Administration and Monitoring	
3	General Disbursements	
4	CIDB Contract Skills Development Goals	
	SUBTOTAL 1 =	
	10 % CONTIGENCIES =	
	SUBTOTAL 2 =	
	15 % VAT =	
	TOTAL (Carried forward to form of offer) =	

SIGNED BY TENDERER: …….....……

C3 SCOPE OF WORKS

C3.1 GENERAL REQUIREMENTS

C3.1.1 Scope

This section covers matters that relate to the project as a whole. Definitions, phrases or wording that would otherwise require repetition in other sections of this document are also covered in this section. Matters covered by the General and/or Particular Conditions of Contract are not repeated in this section, except to provide more detailed information.

The scope of this project is defined as follows:
The Project is **The Upgrade of Main Road P75 (P75/2 from km 5.00 to km 20.437 and P75/3 from km 0.00 to km 5.43) in the Durban Region**

The Consulting Engineer is required to render professional service as per below:
From (P75/2 from km5.00 to km 20.437 and P75/3 from km 0.00 to km 5.43) the project entails the upgrade from gravel to blacktop which requires all IDMS stages as outlined on the FIDPM Policy and the KwaZulu Natal Department of Transport IDPM Policy,2020. There is a Bridge structure along P75/2 at km 5+000 which requires to be upgraded.

From km5.00 to km 20.437 of P75/2 and from km 0.00 to km 5.43 of P75/3 the project requires contract administration and supervision which requires IDMS stage 1 to stage 7 as outlined on the FIDPM policy and the KwaZulu Natal Department of Transport IDPM Policy,2020.

C3.1.2 Location of the Project

The proposed project is located in the Umdoni Local Municipality KZ212 and Umzumbe local Municipality KZ213 under uGu District Municipality DC21 in the Durban Region. A locality plan is available on GIS and site coordinates are provided in this document under Part C6 – Site Information.

C3.1.3 Description of the Project

The envisioned scope of the works has been established through the Road Asset Management Plan (RAMP). The Consulting Engineer shall be required to provide professional consulting services relating to the design and supervision of the construction of **The Upgrade of Main Road P75 (P75/2 from km 5.00 to km 20.437 and P75/3 from km 0.00 to km 5.43) in the Durban Region**

The construction monitoring service shall be for the duration of the works contract.

The services required of the Consulting Engineer are divided into the following Stages. These are to be read inline with the KwaZulu Natal Department of Transport IDPM Policy, 2020 and the ECSA Professional Fees Guideline, 2021.

1. **STAGE 1: Initiation or Prefeasibility Report**

Defines project objectives, needs, acceptance criteria, organisation's priorities and aspirations, procurement strategies, and which sets out the basis for the development of the Concept Report.

Stage 1 is complete when the Initiation Report or Prefeasibility Report is approved.

2. **STAGE 2: Concept or Feasibility Report**

Document the initial design criteria, cost plan, design options and the selection of the preferred design option, or the methods and procedures required to maintain the condition of infrastructure for the project.

Stage 2 is complete when the Concept Report or the Feasibility Report is approved.

3. **STAGE 3: Design Development Report**
   This stage includes the following phases
   - Concept
   - Preliminary
   - Detailed design

A design development report which develops in detail the approved concept to finalise the design and definition criteria, sets out the integrated developed design, and contains the cost plan and schedule for one or more packages.

Stage 3 is complete when the Design Development Report is approved.

4. **STAGE 4: Design Documentation Report**
   This stage includes the following
   a. Tender Documentation.
   b. Technical Report

Production information which provides the detailing, performance definition, specification, sizing and positioning of all systems and components enabling either construction (where the contractor is able to build directly from the information prepared) or the production of manufacturing and installation information for construction.

Stage 4 is complete when the Design Documentation Report is approved.

5. **STAGE 5: Contract Administration and Inspection**

This stage is works stage which includes but not limited to Construction monitoring and deliverable is Completed works which are capable of being occupied or used by public road users.

Stage 5 is complete when the Works Completion Report is approved.

6. **STAGE 6: Handover**

Finalise and assemble record information which accurately reflects the infrastructure that is acquired, rehabilitated, refurbished or maintained.

Stage 6 is complete when the Handover/Record Information Report is approved.

7. **STAGE 7: Close-Out**

Works with notified defects corrected, final account settled, and the close-out report issued.

Stage 7 is complete when the Close-out Report is approved.

8. **Additional duties, Special Services and Specialist Advice.**
   a. Survey
   b. Geotechnical/ Laboratories Services
   c. Environmental Consultant
   d. Health and safety Consultant
   e. Supervision

9. **The appointed Consulting Engineers will be required to execute all works in line with the National Treasury Framework for Infrastructure Procurement and Delivery Management (FIPDM) Policy and the KwaZulu Natal Department of Transport IDPM Policy,2020**

The scope of works will also involve the following:

i. Carry out Conditional Survey or Assessment of the roads, prepare a report for such including the scoping report, prioritisation report and costing thereof including the implementation Programme, etc, then
ii. Produce Designs where necessary to respond to the conditional assessment after receiving written instruction to do so.
iii. Facilitate the Procurement of Contractors to perform construction work arising in line with the Department's guidelines and instructions.
iv. Administration, supervision (where instructed), monitoring (where instructed) and managing works being undertaken by Contractors.
v. Prepare reports for the Programme Manager and Department detailing project physical status, time related milestone and financial status.
vi. Train and mentor graduate engineers, technologists, and technicians from the KZN DOT in-service training list or on lists as provided by the KZN DOT or their designated agent. This shall not limit you from training and mentoring your own graduates; and
vii. The Consulting Engineer will also work on an ad-hoc basis through an instruction to perform work (IPW) to be issued by the Head of Department or Senior General Manager Infrastructure and Regional Services or their Delegates,
viii. The Consulting Engineer will report to the Programme Manager and the responsible Department officials.
ix. Provide support and assistance to the relevant office, on instructions from the Responsibility Manager or his/her designee.
x. In 7 (seven) days of entering into an Agreement with the Department develop and submit a programme to the Programme Manager and Department for written approval. The programme shall make provision for approval of drawings and reports by the Client for each FIDPM stage.
xi. Assist with road assessments and providing relevant information for classification and declaration purposes.
xii. Preparation of technical analysis, feasibility studies, designs, contract documentation, tender adjudication, contract supervision and preparation of completion plans and reports on a project by project basis.
xiii. Assist with obtaining necessary environmental and Health and Safety approvals
xiv. Assist with the implementation of legislative requirements.
xv. Assist the Department in the performance of Health and Safety duties.
xvi. Assist department with project planning and management.
xvii. Prepare reports for the Programme Manager and Department detailing project physical status, time related milestone and financial status.
xviii. All work to be done according to the standard Project Implementation and Management Plan (PIMP).

C3.1.4 Determination of Remuneration

The basis for determining remuneration shall be based on 4 (four) different methods, which are not necessarily mutually exclusive, namely:

- Fee based on the cost of works.
- Separate payment for services that are additional to those provided for in the normal fee-based calculation.
- Time based fees; and
- Reimbursable expenses.

a) Fee determination

The determination of fees will be based on different construction work types, i.e. road works, structures and other works. The estimated cost of construction for each work type is provided by the Client.

This cost of works is a forecasted estimate escalated to the planned commencement date of the works contract (excluding contingencies, CPA during the construction period and VAT). Where a full service is not required, or the commencement date of the works contract is unknown the forecasted cost of the works will be escalated to the completion date of the service.

There will be no escalation for the first 12 months of the award and thereafter escalation will be governed by the Board Notice and in the case of secondments by CPI plus 1%.

The remuneration payable shall be based on the tables below, depending on the type of service required.

Table C3.1.4(a): Remuneration payable

Section	**Stage**	**Road Works, Structures, Other**
C3.2	Stage 1: initiation or Prefeasibility Report	Fee based
C3.3	Stage 2: Concept or Feasibility Report	Fee based
C3.4	Stage 3 Design Development Report	Fee based
C3.5	Stage 4: Design Documentation Report	Fee based
C3.6	Stage 5: Contract Administration and Inspection	Fee based
C3.7	Stage 6: Handover and Closeout Report	Fee based
C3.8	Additional Duties, Special Services and Specialist Advice	Any reimbursable expenditure
C3.9	Disbursement Services	Any reimbursable expenditure

Table C3.1.4(b): Percentage points for phases/stages: Road Works and Structures

Type of Service	Initiation or Prefeasibility	Concept/ Feasibility	Design Development:	Design Documentation	Contract Administration,	Handover / Close out	Total
Road Upgrade	5%	25%	25%	15%	25%	5%	100%
Structures	5%	25%	30%	10%	25%	5%	100%

For major capital projects > R350 million a gateway review is required, In terms of Sections 38 and 51 of the PFMA.

The fee tendered and/or the hourly rate provided by the Client for different employee categories shall include full compensation for the services required under all the different stages as specified herein, including allowances for overhead charges incurred by the Consulting Engineer as part of normal business operations, including the cost of management, as well as payments to administrative, clerical and secretarial staff used to support professional and technical staff in general, materials, printing, and all other costs and all profits.

C3.1.5 Client's Cost Estimate

The estimated costs of the different construction work types with a construction start date of 1 April 2025 are provided below:

Road works for Upgrade	R 400 000 000.00
Structures (bridges and other major structures)	R 100 000 000.00
Estimate Total project value (excluding contingencies, CPA during the construction period and VAT)	**R 500 000 000.00**

The sum of the estimated costs of the relevant work types forms the basis on which the Consulting Engineer shall tender his fee to cover all his costs to develop the detailed design including training. Project assessment costs and production of tender documentation including evaluation of tenders received are not considered to contribute to the development of the design and are separately billed. The final cost of the Works will, however, depend on the strategy selected by the Client based on the most appropriate and cost-effective options identified by the Consulting Engineer during the project assessment and design phases. Scope of work changes may cause an increase or decrease in the fee offered to produce the design. A maximum fee variation of 15% shall be allowed for in this contract.

C3.1.6 Standards, Manuals and Guideline Documents

The standards, manuals and guideline documents to be used in the project are as follows (latest revision to be used as applicable): The appointed Consulting Engineer is expected to have working professional knowledge of all the industry related Technical Manuals.

- TMH 3: Specifications for the Provision of Traffic and Weigh-in-Motion Monitoring Service
- TMH 8: Traffic and Axle Load Monitoring Procedures
- TMH 9: (Standard Visual Assessment Manual for Pavements)
- TMH 13: Network Level Pavement Surveillance Measurements
- TMH 14: South African Standard Automatic Traffic Data Collection Formats
- TMH 16: South African Traffic Impact and Site Traffic Assessment Manual
- TMH 17: South African Trip Data Manual
- TMH 19: Manual for the Visual Assessment of Road Structures
- Draft TMH 11: Standard Survey Methods
- TRH 3: Design and Construction of Surfacing Seals
- TRH 4: Structural Design for Flexible Pavements
- TRH 8: Design and Use of Hot Mix Asphalts in Pavements
- TRH 17: Geometric Design of Rural Roads
- TRH 24: Upgrading of Unpaved Roads
- TRH 26: South African Road Classification and Access Management Manual
- SANRAL's Drainage Manual
- The Highway Capacity Manual
- South African Pavement Engineering Manual (SAPEM)
- South African Road Safety Audit Manual (SARSAM)
- Current industry best practice
- Standard Specifications for Road and Bridge Works: COTO; 2020 or as amended.
- The Client's relevant proforma documentation for services, sub-services, evaluations, etc.
- Guidelines for the Implementation of Labour-Intensive Infrastructure Projects Under The Expanded Public Works Programme (EPWP)
- Any other relevant TMH, TRH or other design manual with standards as accepted by the Client as applicable to this project.

The style, format and presentation of the documents prepared by the Consulting Engineer shall be in accordance with the requirements of the Client. The latest versions and editions of these standards shall always be used.

The above is not an exhaustive list but shall be viewed as being the minimum standards applicable to the project. The Consulting Engineer must apply his own knowledge and experience and recommend to the Client other appropriate standards for his consideration.

C3.1.7 Stakeholder and Community Liaison and Social Facilitation

a) Purpose:

To give effect to the need for transparency and inclusion in the process of delivering services, the Consulting Engineer shall liaise with the project Stakeholders and affected Communities for the duration of the contract's life cycle. This shall be achieved through structured engagement with the PLC which was established for this purpose.

b) Stakeholders:

Any Stakeholder who is affected by the Client's operations in the Target Area(s) and/or who has an interest or concern in the project, either as a decision maker, participant or affected party and may include, amongst others, the following entities:

a) Provincial departments.
b) Municipal departments.
c) Traditional authorities.
d) Community interest groups.
e) Organised youth representation.
f) Organised women representation
g) Organised disabled people representation.
h) Organised labour representation.
i) Other structured community groups such as religion, education, farming, etc.
j) Transport industry.
k) Business sector.
l) Environmental interest groups.
m) Road safety interest groups, and,
n) Any other recognised relevant and representative structure.

c) Target Area for the sourcing of labour for Construction Contract

The target area for the sourcing of labour only needs to be defined in consultation with the Project Liaison Committee (PLC) and may typically include:

(i) One or more Wards that are wholly located in the area within a predefined radius of the construction activity,
(ii) Radius agreed upon on the stakeholder engagement through PLC Meeting(s).

d) Designated Group for sub-contracting to Contractors works

Unless otherwise permissible in terms of the KZN Department of Transport Interim preferential procurement policy January 2023, it is the groups used to define Targeted Labour and the ownership and/or control of Targeted Enterprises and shall be restricted to:

(i) Black designated groups as defined in the Codes of Good Practice issued in terms of Section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act 53 of 2003);
(ii) Black people as defined in Section 1 of the Broad-Based Black Economic Empowerment Act, 2003 (Act 53 of 2003).
(iii) Black people who are women and who are South African citizens.
(iv) Black people who are youth as defined in Section 1 of the National Youth Development Agency Act, 2008 (Act 54 of 2008).

(v) Black people who are people with disabilities as defined in Section 1 of the Employment Equity Act, 1998 (Act 55 of 1998)
(vi) Black people who are military veterans as defined in Section 1 of the Military Veterans Act, 2011 (Act 18 of 2011).
(vii) Black people who are living in rural or under-developed areas or townships.
(viii) Small enterprises as defined in Section 1 of the National Small Enterprise Act, 1996 (Act 102 of 1996);
(ix) Exempted Micro Enterprises (EMEs) as defined in terms of the Code of Good Practice on black economic empowerment issued in terms of Section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act 53 of 2003), with an annual turnover of R10 million or less (Construction Sector Amended Codes of Good Practice); and
(x) Qualifying Small Enterprises (QSEs) as defined in terms of the Code of Good Practice on black economic empowerment issued in terms of Section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act 53 of 2003), with an annual turnover of R10 million and R50 million (Construction Sector Amended Codes of Good Practice).

e) Project Liaison Committee (PLC)

The process of implementing infrastructure projects will be undertaken by means of structured engagement between those responsible for the delivery of the project and the community.
A Project Liaison Committee (PLC) is a vital means of communication between the parties involved with the project. A PLC may be formed if the project is such that a specific community can be identified.
The PLC comprises representatives of the Client, the engineer, and formal structures within the community. The contractor shall make use of these communication channels and shall appoint from amongst his site personnel a responsible person to participate in the affairs of the PLC, and this representative shall also attend the monthly PLC meetings when so requested.
The PLC shall meet at least once every month until such time as it is of the opinion that it could fulfil its tasks by meeting less frequently.
The PLC deals with local labour on the project, and is tasked with:

- assisting with community liaison and the resolution of community disputes.
- devising fair and transparent procedures that will assist the contractor in the engagement of labour.
- advising on and monitoring labour issues; and
- assisting in the resolution of labour disputes.

All labour recruitment, employment and associated risks shall remain the sole responsibility of the contractor.

f) Social Facilitator

The Consulting Engineer shall be required to procure the services of a specialised sub-Service Provider for social facilitation in terms of Clause C3.1.18 of the Scope of the Works. Alternatively, the Consulting Engineer may propose use of in-house social facilitator subject to approval of such proposal by the Client.
Allowance has been made for these requirements in the Pricing Schedule under Additional Duties.

C3.1.8 Permits and Authorisations

Any Environmental Management Plans/Programmes (EMP's) over and above the Client's standard plan that may be required will be treated as a specialised additional service. Conversely, the compilation of any plans/reports necessary to comply with the relevant environmental legislation pertaining to applications to operate quarries and borrow pits will be treated as a normal sub-service. Procurement of sub-Service Providers in such instances shall be in accordance with the requirements of clause C3.1.17. As approvals of any EMPr's etc. are essential prior to the commencement of the Works, the Consulting Engineer shall be responsible to ensure that all submissions to the relevant approving authorities are completed by the milestone date tabled in clause C3.1.9.

C3.1.9 Project Programme

The Consulting Engineer shall programme its duties in such a manner so as to complete the various stages/phases of the total project within the milestone dates specified below.

The Client's programme for this project is as follows:

Table 3.1.9: Project Programme ***(Note to Compiler: To insert dates as per Departments Business plans)***

	Project Stage/Phase	Stage/Phase Completion Date
A	Submission of draft Prefeasibility Report	
B	Submission of draft Feasibility Report	
C	Submission of draft Preliminary Design Report	
D	Submission of Gateway Review Report (if applicable)	
E	Submission of Road Safety Audit Report: Stage 1 Feasibility and Preliminary Design	
F	Submission of draft Detailed Design Report including Structures, Drainage & Geotechnical Reports	
G	Submission of Road Safety Audit Report: Stage 3: Detail Design	
H	Submission of design information to Legal Section(KZN DoT) for land acquisition purposes	
I	Submission of Basic Assessment Report or full EIA report	
J	Submission of WULA to approving authority	
K	Submission of EMP's to approving authority	
L	Submission of Draft Tender Documents for the Works and final Detailed Design Reports	
M	Tender Advertisement	
N	Submission of Final Tender Documents for the Works	
O	Clarification Meeting	
P	Tender Closure	
Q	Submission of Tender Evaluation Report	
R	Access to the site/ Handover	
S	Submission of draft Contract Report & as-built data	Within 3 months of issue of Certificate of Completion for the Works
T	Submission of final Contract Reports and as-built data	Within 1 month of issue of Final Approval Certificate for the Works

C3.1.10 Penalties and Delays

Penalties shall be applied for each calendar day by which the Consulting Engineer fails to meet the pre-scribed dates for submission of the required design information for land acquisition purposes, EMP's and EIA's, draft Design Report(s), Tender Documentation for the Works or Tender Evaluation Report, draft and final Contract Report and As-built data. The quantum of the penalty shall be as listed in the Contract Data. Draft reports and documents shall be submitted to the Client prior to any meetings scheduled for the discussion and finalisation thereof as specified in the documentation requirements. The Consulting Engineer shall thus take this period into account in compiling its programme.

Any delays to the above programme that are attributable to the Client, or to other agreed mitigating circumstances, will not be subject to penalties. In the event of such instances arising, any extensions of time granted shall be limited to the equivalent number of calendar days attributable to each instance.

C3.1.11 Personnel Requirements

a) Key persons

The Consulting Engineer's key persons listed under item C1.3.2 Data Provided by the Consulting Engineer on clause 9.1.1 become a contractual commitment upon award. However, the Client recognises that key persons may for some, or other reason is not available for the full duration of the project and any changes to those listed are, to all intents and purposes, a change or variation to the contract. Any proposed change should be handled formally by way of written request and approval but does not require a Works Authorisation to be submitted. Replacement personnel shall be of same or better competence and experience as those initially accepted. The tenderer must list proposed key personnel for the prescribed positions in the core team in the table provided on the returnable schedule on the Tender Section page T64. The tenderer must provide the key personnel based on his/her experience on similar projects and in line with the project scope of Works.

b) Assistants to Key Persons and Additional Required Resources

Provision has been made in the Pricing Schedule for assistants to all the Key Persons and additional required resources (Design Specialists) other than Key Persons to participate or to gain experience in the positions proposed.

c) Minimum requirements

The minimum qualifications and requirements for the service and sub-Service Provider's personnel shall be as indicated in the table below.

Minimum Requirements

Key personnel capacity requirements

Position	**Minimum Qualification/Registration**	**Minimum Relevant Experience (years)**	**Other Requirements**
Lead Design Engineer	Pr Eng or Pr Tech Eng	6	
Employers Agent Representative (EAR)	Pr Eng or Pr Tech Eng	6	
Employers Agent	Pr Eng or Pr Tech Eng	6	

Sub-service provider capacity requirements

Position	Minimum Qualification/Registration	Minimum Relevant Experience (years)	Other Requirements
Surveyor	Registered Professional Surveyors, Technologist Surveyors, Technician Surveyors	5	Member of SAGC
Engineering Geologist	Pr Sci.Nat	5	SAIEG
Environmental Practitioner	Refer to sub-service procurement document		
OHS Specialist	Design Phase: SACPCMP registration as a Professional Construction HSE Agent Construction Phase: SACPCMP registration as a Professional Construction HSE Agent or Manager	As required by SACPCMP	
Road Safety Audit Team Leader	Pr Tech Eng	8	Road safety course (5 CPD) Minimum 2 (two) audits within 3 (three) years
Senior Materials Technician	National Diploma in civil engineering	10	
	Pr Techni Eng	5	
Materials Technician	None specified	10	
	National Diploma in civil engineering	5	
	Pr Techni Eng	2	

[1] Registered with Engineering Council of South Africa (ECSA) or any other international body recognised by ECSA.

[2] Registered with Environmental Assessment Practitioners of South Africa.

[3] Relevant experience is the actual number of years, measured from the date of acquiring the base qualification (either B.Eng / BSc.Eng or B.Tech for Pr.Eng or Pr.Tech Eng respectively and diploma for Pr.Techni Eng) and worked in the field of the specified position. For the road safety audit team leader, the field shall be road safety design and/or traffic and transportation engineering and/or geometric design.

[4] Full member of the South African Institute for Engineering Geologist.

[5] Registered with the South African Council for Natural Scientific Professions (SACNASP).

[6] South African Council for Project and Construction Management Professions (SACPCMP)

[7] South African Geomatics Council (SAGC)

e) Personnel Category Definitions

The category of personnel necessary to undertake the work shall be approved by the Client in accordance with the following definitions:

i) **Category A** shall mean a top practitioner whose expertise is nationally or internationally recognised and who provides advice at a level of specialisation where such advice is recognised as that of an expert.

ii) **Category B** shall mean a partner, a sole proprietor, a director, or a member who, jointly or severally with his other partners, co-directors, or co-members, bears the risks of business, takes full responsibility for the liabilities of such practice, performs work of a conceptual nature in engineering design and development, provides strategy guidance in planning and executing a project and/or carries responsibility for quality management pertaining to a project. (e.g. The Engineer for the project)

iii) **Category C** shall mean all salaried senior professional and technical staff performing work of an engineering nature and who carry the direct technical responsibility for one or more specific activities related to the project. A person referred to in Categories A or B may also fall in this category if such person performs work of an engineering nature at this level. (e.g. the resident engineer for the project).

iv) **Category D** shall mean all other salaried technical staff performing work of an engineering nature under the direction and control of any person contemplated in categories A, B or C. Category D shall shall be required to be registered as a candidate in their relevant categories as permitted by ECSA. Proof of registration to be attached.

C3.1.12 Meetings and Liaisons

a) Meetings and liaisons between the Client and the Consulting Engineer

Meetings between the Client and the Consulting Engineer are formal occasions. The Client shall perform the duties of chairperson and the Consulting Engineer the secretarial services. The Consulting Engineer shall submit draft minutes to the Client for review before distribution which shall not be later than 14 (fourteen) calendar days after the meeting. Meetings and liaisons shall be scheduled according to the Consulting Engineer's approved programme to discuss and record the progress of the Services.

Draft copies of all reports, design and tender documents submitted for review shall be discussed at specially convened meetings prior to their finalisation.

Attendance at the meetings and liaisons shall include joint venture members and/or Targeted Enterprise(s) (if any), sub-Service Providers and the designated key persons except for the hand-over meeting where the Client shall also perform the duties of secretarial services. A key person shall not be substituted by another Consulting Engineer employee unless express permission for this has been sought from and approved by the Client in writing. The Client shall have the right to delay a meeting because of the non-availability of a key person and any delay costs so incurred shall be for the account of the Consulting Engineer.

i) Project hand-over meeting

The date of the meeting will have been fixed and notice for it and an agenda included with the letter of acceptance of the Consulting Engineer's offer.

The Consulting Engineer shall come to this meeting prepared by his desktop assessment of the project details. The meeting provides a platform for the Consulting Engineer to explain in detail how he intends going about the design development with specific reference to the methods, manuals and systems he will apply. For example, the relevant chapters dealing with pavement composition and behaviour, materials testing, standards, materials utilisation, design, etc. contained in the *South African Pavement Engineering Manual* (SAPEM) and the supporting suite of TMH and TRH publications have significance. The Consulting Engineer shall identify those he thinks are relevant and anticipates he will use in developing the project design.

In addition, the Consulting Engineer shall explain and demonstrate his awareness of the encompassing social, natural, economic, safety and statutory environment within which the project is situated and how each impact on it.

Further, the Consulting Engineer shall demonstrate his understanding of the Topographical survey and Land Acquisition process and the critical aspects that would give rise to material delays in the project proceeding to the Design and Construction Phase.
This meeting also provides the opportunity for administration details to be finalised. Included among these, but without providing limits to what may be required shall be:

- Signing and initialling of the contract document.
- Confirmation of prescribed insurance cover, including that of joint venture members (if any).
- Confirmation of vendor registration.
- Delivery of a compact disc (CD) containing all relevant forms and procedures needed for effective project administration.

ii) Progress meetings

The date for the first progress meeting shall be fixed at the hand-over meeting mindful that it cannot take place until the Consulting Engineer has conducted his *in loco* inspection of the project site. The first progress meeting shall not be scheduled longer than six calendar weeks after the hand-over meeting. Proposals for investigation and intrusive testing will be discussed at this first meeting.

The Consulting Engineer's programme, as envisaged at the hand-over meeting shall be fine-tuned and approved at the first progress meeting. The approved programme shall identify the number and frequency of progress meetings. They may be reduced or increased as necessary to achieve the milestone date of delivery of the approved detailed design.
Topographical surveys and the Land Acquisition process must form an integral part of the Consulting Engineer's programme and must be listed separately in their proposed programme.

The purpose of progress meetings is to discuss the development of the project design and the minutes produced shall form the record of progress against programme. The minutes shall record the discussions held and the decisions made.

Duties of some sub-Service Providers are not directly related to the development and production of the project design; nevertheless, because of the severe impact their progress can place on the programme, their presence at, and participation in, design progress discussions is not negotiable. They shall attend progress meetings and any delays caused by postponements due to their non-availability shall be to the account of the Consulting Engineer.

iii) Gateway Review meetings

All major capital projects having an estimated capital expenditure of more than R350 million, shall have a Gateway Review process at the end of Concept or Preliminary Design Phase (whichever is applicable), prior to the acceptance of such applicable design.

The review meeting shall be initiated by the Client and the focus of such review meeting shall in the first instance be on the quality of the documentation and thereafter on:

1) deliverability (the extent to which a project is deemed likely to deliver the expected benefits within the declared cost, time and performance envelope).
2) affordability (the extent to which the level of expenditure and financial risk involved in a project can be taken up on, given the Client's overall financial position, both singly and in the light of other current and projected commitments); and
3) value for money.

b) other project related meetings

i) The Consulting Engineer must ensure that proceedings of meetings (whether formal or informal) are formally documented. These meetings may be between the Consulting Engineer, sub-Service Providers, and/or other Stakeholders. The Client may attend these meetings.

ii) Project Liaison Committee (PLC) meeting
The PLC will meet on an ad-hoc basis during the Design Stage of the project to discuss and resolve project related issues and matters of interest or concern to project Stakeholders and affected communities, the Client, and the Consulting Engineer. The PLC will meet prior to the monthly site meetings or as may be required from time to time during the Construction Phase to discuss and resolve project related issues and matters of interest or concern to project Stakeholders and affected communities, the Client and the Consulting Engineer.

iii) Works Contract Hand-over meeting
It is required that the Contract Engineer and the Engineer's Representative (Resident Engineer) attend the works contract hand-over meeting.

C3.1.13 Risk Management

The concept of risk shall be discussed at all meetings, starting with the hand-over meeting. The Consulting Engineer shall identify restrictions and limitations on the design development that the various processes may impose, estimate the probability that they will impact on performance, advise what measures are proposed to avoid them and what mitigating measures could be taken to mitigate in the event they do occur. This creates a risk register that must be raised and discussed at each successive progress meeting.
Used properly, the risk register will predict or pre-warn of change as the probability of an event increases so will the need for a Works Authorisation to approve extensions of time or allocation of more funds become more certain.

A base risk register shall be discussed and recorded at the hand-over meeting. It shall be re-visited at each successive progress meeting to confirm the status of each and record any changes. The opportunity to add more or remove others will also be discussed at the progress meetings.
A fundamental element of risk assessment, but by no means the only one, will be economic affordability meaning that each design strategy must be separately and broadly estimated for comparison against the basis of the Client's budget for the project. In essence, this analysis relates to testing the economic and technical feasibility of the Client's envisaged design strategy. Similarly, other identified risks will have a cost element to them, and these must also be brought to the Client's attention for discussion and decision. The Client may require the Consulting Engineer to make us of its standard risk reporting format.

C3.1.14 Document Management

Three (3) hard copies (or otherwise agreed with the Client) of draft reports and/or documents shall be submitted 10 (ten) calendar days prior to the meeting dates for discussion purposes. All changes emanating from these meetings shall be incorporated into a final version. The record of the changes shall be by means of track changes to the draft version and submitted in CD format.

All reports and/or documents shall utilise the Client's proforma formatting without alteration unless specific request for a change has been submitted to and approved by the Client.

C3.1.15 Management of Drawings

When the Consulting Engineer produces drawings, he shall, where applicable, use the Client's typical details and when doing so they shall become integrated into the Consulting Engineer's detail design for which he will assume full professional responsibility.

The requirements shown on the Client's proforma drawing, available on the Client's web site, shall be used. Drawings shall incorporate what has been discussed and agreed at the various progress meetings. All drawings issued to the contractor shall be fully signed and any amendments thereof shall also carry full original signatures.

C3.1.16 Safety

This part of the specification has the objective to assist the Consulting Engineer entering into contracts with the Client that they comply with the Occupational Health and Safety (OH&S) Act, No 85 of 1993, as well as all applicable Regulations. Compliance with this document does not absolve the Consulting Engineer from complying with minimum legal requirements and the Consulting Engineer remains responsible for the health and safety of his employees and those of his Mandataries. The Consulting Engineer shall therefore include this part of the specification to any contract that he may have with sub-Service Providers and/or suppliers.
This part also covers the development of a health and safety specification that addresses all aspects of occupational health and safety as affected by this contract. It provides the requirements that the Consulting Engineer shall comply with in order to reduce the risks associated with this contract, which may lead to incidents causing injury and/or ill health. In this matter the spirit and intention of Regulation 5(1)(l) of the Construction Regulations, 2014, regarding negotiations between the parties, related to the contents and approval of the Health and Safety Plan, must be complied with.

The Consulting Engineer shall on award of the contract become the Client's Agent in terms of Construction Regulation 5(5), (6) and (7) of the Occupational Health and Safety Act, (Act 85 of 1993). The duties and responsibilities as the Client's Agent are as prescribed in Construction Regulation 5(7).

For purposes of clarity typical duties required of the Consulting Engineer are given in (b) and (c) below, but they shall not be interpreted as being exhaustive and if any conflict between them and the legislated Construction Regulations occurs the latter shall rule.

a) Project Specific Requirements

The following is a list of Baseline Risk Assessment and project specific health and safety specifications prepared by the Client in terms of Construction Regulation 5(1)(a) and 5(1)(f).

i) Baseline Risk Assessment for Design Phase

- Working in elevated positions (e.g., Bridge Inspections)
- Working over water environments (e.g., Bridge Inspections)
- Excavation – locating existing underground services, digging test pits
- Manual handling – setting up surveying equipment
- Ergonomic risks
- High & Low voltage power lines – overhead & underground
- Work in close proximity to railway lines
- Uneven ground surfaces
- Personal safety & security risks
- Traffic Control (Ensure Correct Signage at Correct Distances) as per our Standard Details
- Exposure to noise
- Working in close proximity to traffic
- Working with hot materials
- Radioactive equipment
- Hazardous Chemical Substances
- Flammable Materials
- Driving to and from site
- Biological risks e.g., bees, snakes, spiders, etc.
- Hazardous Biological Agents

- Environmental risks
  - Bad weather conditions,
    - rain,
    - lightning,
    - wind,
  - poor visibility
  - heat exposure – dehydration
  - cold environment

ii) Baseline Risk Assessment for Supervision Phase

- Clearing and grubbing of the area/site
- Site establishment including:
  - Office(s)
  - Secure/safe storage for materials, plant and equipment
  - Ablutions
  - Sheltered eating area
  - Maintenance workshop
  - Vehicle access to the site
  - Temporary fuel storage, where applicable
  - Laboratory establishment, where applicable (Client responsibility)
- Location of existing services, e.g., Telecommunications, electrical supply and similar
- Installation and maintenance of temporary construction electrical supply, lighting and equipment
- Adjacent land uses/surrounding property exposures
- Boundary and access control/public liability exposures (NB: The Client is also responsible for the OH&S of non-employees affected by his/her work activities)
- Health risks arising from neighbouring as well as own activities and from the environment, e.g., threats by dogs, bees, snakes, lightning, etc.
- Exposure to a water environment
- Exposure to noise
- Exposure to vibration
- Protection against dehydration and heat exhaustion
- Protection from wet and cold conditions
- Hazardous Biological Agents that could lead to epidemics and pandemics
- Dealing with HIV/Aids and other diseases such as silicosis or asbestosis, where applicable
- Use of portable electrical equipment including:
  - Angle grinder
  - Electrical drilling machine
  - Circular saw
  - Generator
- Excavations including:
  - Ground/soil conditions
  - Trenching
  - Shoring
  - Drainage of trenches
- Loading and off-loading of trucks
- Aggregate/sand and other materials delivery
- Manual and mechanical handling
- Lifting and lowering operations
- Driving and operation of construction vehicles and mobile plant including:
  - Trenching machine

  - Excavator
  - Bomag roller
  - Plate compactor
  - Front end loader
  - Mobile cranes and the ancillary lifting tackle
  - Grader
  - Parking of vehicles and mobile plant
  - Towing of vehicles and mobile plant
- Use and storage of flammable liquids and other hazardous substances, e.g. petrol, diesel, cement, asphalt, bituminous materials and similar
- Layering and bedding
- Installation of pipes in trenches
- Pressure testing of pipelines
- Backfilling of trenches
- Protection against flooding
- Gabion work
- Use of explosives
- Protection from overhead power lines (High and low)
- Work adjacent or in proximity of railway lines
- Work adjacent or in proximity of traffic
- Working at heights
- Working in confined spaces – tunnelling
- Formwork and support work (temporary works) including scaffolding
- Demolition work, where applicable
- Bulk mixing plant, where applicable
- Environmental impacts such as pollution of water, air or soil

b) Design Phase

The Consulting Engineer or his registered Professional Construction Health & Safety Agent must identify elements of the design that are inherently dangerous or hazardous to the health and safety of Contractor employees during the construction phase and design in such a manner as to mitigate or eliminate the risk where possible. To this avail the Consulting Engineer (or his Agent as outlined above) must prepare a baseline risk assessment for the intended construction work project and make the same available to the Client. This duty of identification continues into the construction phase of the project regardless that the designer may not be monitoring the construction phase. All identified dangers/hazards are to be listed and brought to the attention of potential contractors by means of the baseline risk assessment as outlined above and envisaged in Construction Regulations 5(1)(a); (b) and (c).

For example, staging for bridge decks or shoring of unstable excavations is the designer's responsibility to identify and notify of the health and safety risk. It is also the designer's responsibility to undertake inspections at critical phases of construction to ensure that the identified risks are continuously and appropriately mitigated.

c) Construction Phase

During the construction phase the supervising Consulting Engineer must ensure that the Client's duties are continuously fulfilled, meaning that the Consulting Engineer has to include amongst its permanent monitoring staff at least one appropriately trained member. In addition, the Consulting Engineer must conduct monthly internal audits to ensure the site personnel are adhering to the statutory requirements. Costs for performing this duty are recoverable via the rate offered for this scheduled item of work. This audit may be conducted by either the registered Professional Construction Health and Safety Agent or a registered Construction Health and Safety Manager.

The Client may order external audits, the costs of which are separately recoverable as a disbursement to the specialist sub-Service Provider selected to conduct such audits.

Furthermore, the Consulting Engineer must, in compliance with Section 24 of the Occupational Health and Safety Act (Act 85 of 1993) report immediately to the Client's Health and Safety Officer and the relevant project manager the details of a Section 24 incident, including confirmation that the construction contractor has similarly reported the same incident directly to the Department of Labour.

d) Health related Epidemics and Pandemics

The Consulting Engineer shall, as far as reasonably practicable make provision for health-related epidemics and pandemics that is declared by authorities. The Client is aware that this provision will not speak to specific cases. Once the nature and scale of the epidemic or pandemic is known, the Consulting Engineer must ensure that the requirements stipulated in the Hazardous Biological Agents Regulation are adhered to and in particular the following as described in the mentioned Regulation:

- Information and training of employees
- Monitoring exposure at the workplace
- Medical surveillance of employees
- Keeping of records
- Control of Exposure
- Personal Protective Equipment and facilities
- Maintenance of control measures and facilities

e) General Occupational Health and Safety Provisions

Site specific health and safety specifications for the intended construction work based on the Baseline Risk Assessment.

C3.1.17 Procedure for Procurement of sub-Service Providers

A sub-service is taken to mean any service necessary for the production of the project design and later construction, which is performed by someone other than the Consulting Engineer. A sub-service procured directly by the Consulting Engineer requires the Consulting Engineer to enter into a sub-service agreement with that sub-Service Provider. The relationship between the Consulting Engineer and sub-Service Provider is that of contractor/sub-contractor.

Another type of sub-service is less direct because the service required has already been procured by the Client under a separate agreement. The role of the Consulting Engineer in the management of this sub-service is that of the Client's representative. In both cases the Consulting Engineer is responsible for the performance of the sub-service.

Procurement of a sub-service shall be undertaken by means of a quotation/tender process. The Consulting Engineer shall compile and issue relevant and approved terms of reference, together with the relevant work/pricing schedules, in accordance with the Client's standard proformas and Supply Chain Management and procurement policies. This will require the Consulting Engineer to advertise for an open tender process or invite quotations from identified potential sub-Service Providers. Submitted quotations/tenders, in a sealed envelope by the date and time agreed and must be opened in public by the Client's delegated staff. The Consulting Engineer shall remove under signature all submitted offers for analysis and submit a report with recommendations to the Client for approval prior to the appointment of any sub-Service Provider. Once approved, the Consulting Engineer shall enter into an agreement with the sub-Service Provider with a copy of same submitted to the Client.

Consulting Engineers appointed to a project are not permitted to bid for any sub-service related to the project.

C3.1.18 Participation of Targeted Enterprise(s)

The Client may stipulate the involvement of Targeted Enterprise(s) in the project design and construction as a mechanism to broaden the economic share of the national spend on engineering services and as a means to hasten and improve the transfer of technical skills.
The Consulting Engineer's Targeted Enterprise(s) become a contractual commitment upon award.

a) The Targeted Enterprise(s) shall be involved throughout the project stages and the percentage specified in the Contract Data shall be applicable to actual work split (excluding all provisional and prime cost sums but including site staff salaries) amongst the following stages:
   - Initiation
   - Concept and Viability
   - Design Development
   - Design Documentation
   - Administration and Monitoring of the Works
   - Close out

b) The use of Targeted Enterprise personnel as site staff during the administration and monitoring of the Works phase is included as part of the percentage specified in the Contract Data.

C3.1.19 Training

a) Client's trainees

The Client may enter into a separate arrangement with the Consulting Engineer for training of its own permanent employees as a secondment for the express purpose of providing its candidate Engineers/Technologists/Technicians with design and/or site supervision experience. The Client may also enter into an arrangement with the Consulting Engineer to provide experiential training to students.

The design phase provides the opportunity for students and Candidate Engineers/Technologists/Technicians to receive training. Three distinct categories of training are recognised. The first, and most formal, is the placement of the Client's candidate engineers/Technicians with the Consulting Engineer for training distinctly geared to professional registration with the Engineering Council of South Africa (ECSA). The training provided shall be predominantly, but not exclusively, related to this project and may be subject to scrutiny and inspection by the Client who is responsible for candidates' remunerations. The trainees are expected to work according to the Consulting Engineer's terms and conditions of employment, especially those related to confidentiality. They are to be treated as if they were the Consulting Engineer's own full-time personnel. No allowances shall be made for working overtime.

Less formal will be experiential training the Consulting Engineer is requested to provide to university or university of technology undergraduate students. The training provided must be in accordance with the academic institution requirements.

The Consulting Engineer, apart from providing the technical training, shall also provide trainees with all the tools (including appropriate information technology hardware and software) and space necessary to carry out engineering or survey work as if they were the Consulting Engineer's own permanent staff.

Reporting on training progress of each candidate engineer/Technician and student shall be compiled according to the formats and intervals set by Client.

C3.1.20 Contract(s)/Agreement(s) with Targeted Enterprise(s)

The Consulting Engineer shall enter into a contract/agreement with the Targeted Enterprise(s) to provide him with the opportunity to participate in KZN Department of Transport projects under their guidance. Copies of the contract/agreement(s) shall be provided to the Client.

C3.1.21 Consulting Engineer's Estimated Cost of the Works

The Consulting Engineer shall at the completion of each stage or phase where applicable, provide the Client with an updated realistic estimate of the cost of the works. Despite this requirement, the Consulting Engineer shall, at the end of February of each year, provide the Client with an updated realistic estimate of the cost of the works as well as the foreseen duration of the works.

C3.1.22 Economic Feasibility Analysis

Development of the design shall include continuous testing of the feasibility of the project so that in the unlikely event of a total misreading of the project scope as prescribed a decision can be made to abandon, change or continue with the design development. The earlier the warning the earlier change decisions can be made.

C3.1.23 Communication Management

Communication management must be identified early in the life of the project and discussed with the Client as to who shall be responsible for liaising with which party and to define the limits or authority that either party has to speak for or commit the other.

C3.1.24 Services

The early identification of services is a critical element in the project. The Consulting Engineer shall identify those that are observable during the project initiation stage and those resulting from further later investigations.

During the design development phase, the Consulting Engineer shall continuously liaise with the identified service owners and with the Client. A first step is to search for any wayleave or similar authorisation agreement for the service to be placed within, alongside or across the project site. All liaisons shall be formal and in writing.

Service relocation may be required. If any design is required to temporarily or permanently relocate the service such design shall not be to the Client's account unless agreed during liaison with the service owner. Regardless that any agreement is reached the Client shall not take responsibility for the subsequent design, it being deemed that it cannot assume liability for property that it does not own or operate. However, the Consulting Engineer is at liberty to offer its design capabilities to the service owner under an agreement between them. The service owner's design cost recovery may be via the contract should the Client and service owner so agree, but no design liability shall pass to the Client.

C3.1.25 Access Management

Where applicable, the appointed Consulting Engineer shall ensure the adequate management of access as per the provisions of TRH 26: South African Road Classification and Access Management Manual and in consultation with the Client.

C2 MEASUREMENT AND PAYMENT

1. Normal Fee Services

1.1 PROJECT INITIATION STAGE

1.1.1 Scope

This section covers the project objectives, needs, acceptance criteria, the Department's priorities and aspirations, procurement strategies, and sets out the basis for the development of the Concept Report.

1.1.2 Assessment in Phases

In the first part of project Initiation is the visual assessment and thorough analysis of information gathered, whereafter the Consulting Engineer shall arrange for the first progress meeting with the Client for the purpose of confirming the design strategy and acquiring approval for the type, quantity and positioning of intrusive and other investigations which form the third part of project assessment.
Assessment requirements are summarised below and expanded in the following paragraphs.

- Assist in developing a clear project brief.
- Advise on the rights, constraints, consents, and approvals.
- Define the services and scope of work required.
- Advise on criteria specific to own scope of work that could influence the project life cycle.
- cost significantly.
- Review and analyse information gathered.
- Conduct visual assessment of the road based on TMH 9 and TMH 12.
- Identify statutory and regulatory requirements.
- Evaluate risk that the project presents to the Client.
- Other criteria

a) Traffic assessment

The Consulting Engineer shall review the traffic data provided to determine any potential need for capacity and pavement improvement and identify any need for additional traffic counts or studies.

b) Structures assessment

Assess the available information and conduct a site inspection of all structures located on the route in order to undertake a condition assessment and to gain a general appreciation for the structures and the structural issues that may arise as a result of the envisaged work.

Identify which structures require capacity improvement (hydrologically, traffic, strength, etc.) and maintenance/rehabilitation interventions. All structures shall be assessed, however, in addition the following bridges have been identified by the Client that require assessment for defects to be repaired as part of this project.

1.1.3 Identification of Statutory and Regulatory Controls

The Consulting Engineer shall identify legislation applicable to this project and bring to the notice of the Client together with recommendations how compliance thereto can be incorporated into the project design.
The following aspects must be dealt with at this point:

- Road closures arising from the design.
- The closure of public places that would arise from the design.
- The impact must be determined that the project/design will have on zoning criteria for properties in a township. This is in particular reference to where such properties will be reduced to a size as a result of the design and where such remaining portions will be in conflict with such zoning criteria; and

- Statutory provisions relating to Mining Rights, Proclamations and De-proclamations of Provincial and Municipal Roads, the closure of streets and public places, the existence of Informal Property Rights, Traditional Authorities, etc. need to be clearly identified at this stage.

The Consulting Engineer will be required to facilitate the conclusion of the above agreement(s) and where such agreement(s) shall be concluded prior to the commencement of any construction phase of the project.

1.1.4 Other Authorities and Stakeholders

The Consulting Engineer shall identify all authorities and stakeholders who should be consulted about the design and implementation of this project and the degree to which liaison with each is expected. In addition, the Consulting Engineer shall compile a list of the relevant persons, their capacity to act for such authority or body and their contact details, with whom liaison must take place but shall not commit to any meetings without first engaging the Client to confirm how and when such meetings should be held.
Where the Project traverses land under the control of a Tribal (Traditional) Authority then the Department of Rural Development and Land Reform is to be notified and a determination and record of which officer is responsible for the area affected must be made.

Where a Project Liaison Committee (PLC) has not been established as a community structure, the Client under the guidance of the Consulting Engineer will establish s a PLC within the boundary concerned.

During the development of the design and the construction phases the Consulting Engineer shall continue these same liaison duties, including representing the Client if so authorised and providing the Client with written records of all liaison meetings and conversations.
Allowance has been made for these requirements in the Pricing Schedule under Additional Duties.

1.1.5 Project Initiation Report

A project report shall be submitted for discussion at the progress meeting. The Consulting Engineer shall, using the findings of the Initial Assessment already conducted, identify problem areas, and provide comprehensive evidence that their underlying cause is understood and propose appropriate corrective or reparative remedies. These proposals will accompany others for multiple design methodologies that are considered appropriate to the project including identification of their respective technical inputs. All proposals shall be discussed with the Client. At least 2 (three) different methodologies must be proposed in the assessment report in cases where a Concept and/or Preliminary Design is not required so that the Client is presented with an array of design options from which to make decisions for progression to Detail Design.

Although all aspects are important, particular emphasis should be given to the materials making up the existing pavement, their current reported condition, and their respective sources.

During the first part of the assessment and based purely on the information given and/or collected, the Consulting Engineer must devise other feasible strategies for further discussion with the Client.

1.2 CONCEPT AND VIABILITY

1.2.1 Scope

This section covers the investigations preceding any design development. This process requires investigations to be undertaken either in-house or through the appointment of relevant sub-Consulting Engineers.

1.2.2 Investigations, Sampling and Testing

investigations are deemed to be any type of investigation that probes into or removes from the pavement layers, sub-grades, structures' elements, and other areas, e.g., cuttings, etc.

Supervision of intrusive investigations shall not be delegated, they shall be supervised and logged by the key person listed as the relevant design specialist.
Provision for investigations, sampling and testing has been allowed for in the Pricing Schedule.

The Consulting Engineer shall submit for approval a schedule of proposed work for all field work, sampling and testing prior to commencement.

1.2.3 Survey Services

All survey requirements must be identified by the Consulting Engineer as early as possible during the Project Assessment stage to ensure that there will be sufficient time to undertake these surveys. It is important that the Consulting Engineer familiarises himself with the requirements of TMH11: Standard Survey Methods to ensure that the survey deliverables will conform to the Consulting Engineer's requirements.

a) Procurement of the survey sub-service

The Consulting Engineer shall identify all potential survey requirements during the initial and visual assessment stages, including the survey of potential borrow pits and/or quarries. Discussion of purpose and extent of the survey shall be included in the agenda of the first progress meeting to which the Legal Section may be invited should it be required.

Tenders shall be invited only from surveyors who are suitably registered in terms of the Geomatics Profession Act, Act 19 of 2013. The procurement of survey work shall conform to the Client's procurement policies and procedures. The procedures as set out below shall apply after appointment of the survey contractor. The Consulting Engineer shall then become responsible for the performance of their sub-Consulting Engineers. All surveys are to be carried out to TMH11 standards.

1.2.4 Traffic Studies Services

All traffic monitoring requirements must be identified by the Consulting Engineer as early as possible during the Project Assessment stage to ensure that there will be sufficient time to undertake these surveys. It is important that the Consulting Engineer familiarises himself with the requirements of TMH3: Specifications for the Provision of Traffic and Weigh-in-Motion Monitoring Services and TMH14: South African Standard Traffic Data Collection Format, TRH 16: Traffic Loading for Pavement and Rehabilitation Design and TMH 16: South African Traffic Impact and Site Traffic Assessment Manual to ensure that the traffic monitoring deliverables will conform to the Consulting Engineer and Client's requirements.

A minimum of 7 day, 12-hour counts is required for all pavement designs. The appropriate locations shall be identified and discussed with the Client prior to the appointment of the Traffic monitoring service provider.

a) Procurement of the traffic monitoring Service Provider

The Consulting Engineer shall identify all potential traffic monitoring requirements during the initial and visual assessment stages.

However, if agreed that the Consulting Engineer must procure the traffic monitoring services, a prime cost sum has been provided in the Pricing Schedule. In such a case, the latest standard traffic monitoring proforma tender document, which covers all traffic monitoring types, will be made available by the Client. Tender shall be invited only from traffic monitoring Service Providers who are suitable certified in terms of TMH3 for the specific traffic monitoring system type required. The procurement of traffic monitoring work

shall conform to the Client's procurement policies and procedures. All traffic monitoring is to be carried out to TMH3/TMH14/TRH16/TMH16 standards as applicable.

1.2.5 Environmental sub-service

The Consulting Engineer shall identify all potential environmental issues relating to the envisaged scope of the Works during the assessment stage, including areas where potential borrow pits and/or quarries may be located.

The environmental sub-Service Provider shall distinguish between the design and construction stages. The Client recommends that the same sub-Service Provider fulfils the duties of the Environmental Assessment Practitioner (EAP) and later as the Environmental Control Officer (ECO), in accordance with the Mineral and Petroleum Resources Development Act (28 of 2002).

Specialist studies identified as being necessary do not form part of normal duties, and such services may have to be separately procured, but still in accordance with the procedures for the procurement of sub-Service Providers.

1.2.6 Geotechnical and Drilling Services

Sub-service work shall only be undertaken by suitably qualified and experienced personnel. Dependant on the scope and/or scale of such sub-services, supervision may be required on a full time or part time basis as determined by the Client.

The logging of the cores and profiling of test pits are the Consulting Engineer's responsibility. All core logging and test pit profiling are to be carried out, officially checked, and signed by a suitably qualified and experienced engineering geologist as specified in COTO.

The Consulting Engineer's geotechnical engineer shall be responsible for reviewing the results of the investigations and confirming its acceptance. The geotechnical engineer will be involved in the planning, procurement and managing of the sub-contract. The geotechnical engineer will be responsible for the acceptance of data collected during the investigation including amongst others, test pit profiles,

laboratory test, etc. and the production of a factual geotechnical report. In addition, the geotechnical engineer will be responsible for an interpretive geotechnical report as well as a design geotechnical report required for fulfilling the design. The geotechnical engineer shall be involved during the construction phase in accordance with his/her obligation regarding professional responsibilities.

1.2.7 Pavement Investigation and Sampling

a) Test pits

All test pits shall be excavated, profiled, and sampled in accordance with relevant Manual and industry best practice. The dimensions of the excavation shall be sufficient to permit safe working conditions and to allow for adequate quantities of material to be sampled from each horizon for the envisaged testing. All test pits shall be excavated to a minimum depth of 800mm, or deeper if so, specified by the design engineer.

All test pits shall be backfilled utilizing material which is at least of a similar quality as that removed from the relevant horizon. Compaction shall be by appropriate compaction equipment in layers not exceeding 150mm. An appropriate patch such be reinstated in cases where the initial surfacing was removed to excavate the test pit.

b) Transport of samples to laboratory

All samples shall be securely fastened, labelled, and transported to the laboratory appointed to carry out the required testing.

c) Laboratory testing

Only SANAS accredited laboratories shall be permitted to carry out laboratory testing of materials. All testing shall be carried out in accordance with the methods specified in the relevant test methods and applicable to the design requirements.

Provision for the costs of any laboratory testing has been included under specific tests and/or under a Provisional Sum item in the Pricing Schedule.

1.3 DESIGN DEVELOPMENT STAGE

1.3.1 Scope

This section covers the requirements for the compilation and submission of a Concept and/or Preliminary and/or Detailed Design and the various phases that the Consulting Engineer may have to apply to develop the design in such a way that the Client is provided the opportunity to select the most appropriate design strategy.

It is a fundamental requirement that the Consulting Engineer has a thorough working knowledge of the Client's complete suite of design standards, codes, manuals, and guidelines (i.e., those that it publishes and those for which it provides an industry custodianship), which shall be used in the production of the designs in all their separate phases. In addition, the Consulting Engineer shall apply any other industry best practice publication that may be appropriate. Furthermore, the Client's philosophy of appropriate standards and cost effectiveness shall always be considered.

1.3.2 Preliminary Design

The purpose of preliminary design is to develop more than one option for presentation to the Client for selection of that which is the most appropriate based on technical functionality and economic benefit. The selected option(s) will then be further developed in the detailed design phase.

On projects that commence with this design phase, the Consulting Engineer shall, using the findings of the project assessment and investigations or concept design already conducted, identify problem areas, provide comprehensive evidence that their underlying cause is understood and propose appropriate corrective or reparative remedies. These proposals will accompany others for multiple design methodologies that are considered appropriate to the project including identification of their respective technical inputs. All proposals shall be discussed with the Client. At least 3 (three) different methodologies must be proposed not all of which need to include identified remedies. Proposed methodologies should separately deal with elements relating to capacity improvements so that these may be individually developed together with the methodologies so that the Client is presented with an array of design options from which to make decisions for progression to detailed design.

The Consulting Engineer may be requested to present an alternative design proposal using new construction methodologies and technologies as one of the options. Reference is made to TRH 24: Upgrading of Unpaved Roads. It is therefore imperative that the Consulting Engineer familiarises themselves with all the relevant industry design manuals.

The duties to be performed include but are not limited to the following:

i. Provide a programme for documentation and implementation of the works.
ii. Include a baseline risk assessment and a health and safety specification.
iii. Include an operations and maintenance support plan over the service life.
iv. Establish the feasibility of satisfying the original scope of works within the original budget, and if not, motivate a revised scope and/or budget.
v. Include a technology (alternatives) option assessment.

vi. Include a regulatory due diligence (compliance with various regulations and required statutory permissions impacting this project).
vii. Advising the Client as to the need for any further surveys of any kind, analysis, tests and site or other investigations which may be required and arranging for these to be carried out at the Client's expense including a risk assessment and sensitivity analysis associated with the need.
viii. Advising the Client regarding environmental requirements and management plans and attending to the same.
ix. Advising the Client, as may be necessary, upon the appointment of and brief to other professional engineers, architects and specialist advisers and arranging such appointments and consultations with such advisers in matters affecting the works.
x. Consultation on technical matters with authorities and interested and affected parties.
xi. Making modifications to the preliminary design of the works in connection with or dictated by the consultations aforesaid.
xii. Identification and reporting on services and owners as well as relocations/protection measures required.
xiii. Submission of estimates of capital and life cycle costs and economic and financial implications in relation to the proposals and the confirmation of the financial sustainability thereof.
xiv. Compilation and submission of a Preliminary Design Report and if required a Preliminary Materials Report.
xv. A separate Geotechnical Report must be submitted where geotechnical investigations are required.
xvi. A separate Drainage Report will be needed for each Bridge and Major Culvert and shall form part of the first stage submission as described above.
xvii. Preparing, reporting, and presenting the alternatives to the Client's Gateway Review Committee for project costs higher than R350 million.

1.3.3 Detailed Design

The Client will select from the outcome of the project assessment stage or preliminary design phase, the design option and other possible design elements that are to be developed to detailed design.

The duties to be performed include but are not limited to the following:

i. Provide a programme for documentation and implementation of the works.
ii. Include a baseline risk assessment and a health and safety specification.
iii. Include an operations and maintenance support plan over the service life.
iv. Establish the feasibility of satisfying the original scope of works within the original budget, and if not, motivate a revised scope and/or budget.
v. Include a technology (alternatives) option assessment.
vi. Include a regulatory due diligence (compliance with various regulations and required statutory permissions impacting this project).
vii. Advise the Client as to the necessity for setting out or staking out the works, establishment of construction beacons.
viii. Advise the Client as to the need for any further surveys of any kind, analysis, tests, or other investigations which may be required and arranging for these to be carried out including a risk assessment and sensitivity analysis associated with the need.
ix. Advise the Client regarding environmental requirements and management and attending to same as agreed with the Client.
x. Estimates of the cost of the works, using the unit rates of the Client's database if applicable.
xi. The timeous arrangement for the relocation of any services which may disrupt the construction programme. This may include relocation of services prior to construction stage.
xii. Submit the necessary design documentation to local and other authorities for approval, if required.
xiii. Consultation on and incorporation of, where applicable, technical matters with authorities and interested and affected parties.

xiv. Compilation and submission of a Detailed Design Report and if required a Materials Report.
If the project requires only a Detailed Design Phase and a preliminary design on structures was previously conducted, the Consulting Engineer must confirm the findings on the Preliminary Design and re-submit a structures report if changes are required. The selected recommended option is then to be approved by the Client's Bridge Engineer before any detail design is commenced.

xv. Submission of Economic Feasibility Analysis (where required) and confirm the financial sustainability of the project.

xvi. Undertake a market analysis in terms of the CIDB guidelines for undertaking a feasibility study (CIDB grading, Central Supplier Database, etc. of availability and type of Targeted Enterprises for the Works Contract.

If the project requires only the detail design phase the Consulting Engineer shall, using the findings of the project assessment and investigations or designs already conducted, identify problem areas, provide comprehensive evidence that their underlying cause is understood and propose appropriate corrective or reparative remedies. The selected recommended option is then to be approved by the Client's Bridge Engineer before any detail design is commenced.

Detail design requires the drafting of a final project specification that will be incorporated into a full tender document adopted from the Client's proforma tender document. A full set of drawings complying with the Client's latest drawing standards shall be presented for signature. The Detailed Design shall be signed off by the by Lead Designer with an ECSA Professional Registration (Pr Eng/Pr Tech Eng), appropriate experience as detailed in the Functionality under the Tender Section. The Consulting Engineer shall be aware of the Client's procedures for iterative presentations of drawings for approval, signature, archiving and amendment to include the as-built record. The Consulting Engineer shall be required to obtain design approvals from all the relevant sections before finalising the documentation stage.

1.3.4 OHS Requirements

The Consulting Engineer shall at all stages of the design development identify elements of the design that are inherently dangerous or hazardous during the construction phase and design in such a manner as to mitigate or eliminate the risk where possible. At the culmination of each development phase all identified dangers/hazards shall be listed and brought to the attention of the Client and agreed hazards shall be emphasised and given prominence by way of notification on the drawings and separately listed in the respective phase-end reports. They shall appear in the drawings and the tender document for issue to a contractor.
For example, staging for bridge decks or shoring of unstable excavations is the designer's responsibility to identify and notify of the health and safety risk.

1.3.5 Environmental Requirements

Throughout the development of the project design the Consulting Engineer shall liaise closely with the appointed EAP as he/she performs the environmental subservice. It is desirable that the EAP accompanies the Consulting Engineer to the regular progress meetings to ensure accurate reporting on the state of the application for environmental approvals. The compilation of the various Environmental Management Programmes (EMPrs) that the respective relevant authorities require shall be modelled on the Client's standard Environmental Management Plan with as little deviation from it as possible. Any adaptation or change shall be reported to the Client for approval and later incorporation into the contract document.

Any cause derived from these EMPrs that requires incorporation into the design shall similarly be reported to the Client for approval.

1.3.6 Land Requirements

a) Property Report

A comprehensive and detailed Property Report shall be compiled. Individuals hold informal and community rights over Tribal Land. Consequently, the Consulting Engineer must ensure that he is fully conversant with the Interim Protection of Informal Land Rights Act, Act 31 of 1996 and the procedures contained therein. These rights are not registered and recorded in a Deeds Office. On-site meetings must therefore be held with the affected communities and their leadership to determine the extent and nature of their rights. The exact impact that the project will have on their rights must be clearly determined in community meetings to avoid conflict. The Property Report must define each right affected, identify the boundaries and ownership thereof and clearly record all information related to these rights.

1.3.7 Road Safety Audit

The Consulting Engineer shall in terms of the South African Road Safety Audit Manual (Second Edition, May 2012), hereafter referred to as the SARSAM:

a) Develop a Scope of Works for the procurement of the services of a Road Safety Audit Team as required, such Scope of Works shall include but are not limited to:
   - Conducting a Project Information Review.
   - Conducting a Site Inspection/s.
   - Producing a Road Safety Audit Report
   - Issuing the Road Safety Audit Report and discussing the initial findings with Client and Consulting Engineer.

The Consulting Engineer shall implement Design Changes as identified by the Road Safety Audit Team and as agreed to with Client, as specified in the Response Report.

The Consulting Engineer should provide written feedback on lessons learned and knowledge gained, which shall take the form of a short report.

The following Stages of Road Safety Audits will be applied to the following project types:

Road Safety Audits	***New Projects***	***Upgrading Projects***
		Road Rehabilitation and Bridges
Stage 1: Feasibility / Preliminary Design *(As defined in Clause C3.4.5 Concept Design and C3.4.6 Preliminary Design)*	*Optional*	*Optional*
Stage 2: Preliminary Design *(As defined in Clause C3.4.6 Preliminary Design)* ***/ Draft Design*** *(As defined in SARSAM)*	*Yes*	*Yes*
Stage 3: Detail Design, *Including Traffic Accommodation Design (As defined in Clause C3.4.7 and the SARSAM)*	*Optional*	*Optional*
Stage 4: Construction *(Road Safety Audit of Traffic Accommodation proposed by the Contractor as defined in SARSAM)*	*Optional*	*Optional*

Stage 5: Pre-opening *(As defined in SARSAM)*	*Yes*	*Yes*
Total Number of Audits	***Minimum of 3***	***Minimum of 2***

1.3.8 Project Cost and Feasibility

A separate cost estimate shall be compiled for each design option. On completion of the detailed design stage this estimate shall consist of a priced schedule of quantities. This estimate shall include a contractor's probable preliminary and general costs as well as a provision for contract price adjustment.

In addition to a cost estimate of each design being developed a feasibility analysis shall also be conducted as specified.

1.3.9 Project Programme and Constructability

At completion of the detailed design phase the Consulting Engineer shall provide a comprehensive logic programme of construction activities regardless of the complexity of the project. The programme shall also be used to verify a realistic construction period.

The programme shall include the following:

- A work breakdown structure that identifies all major activities.
- Scheduled duration for each activity.
- Time for each activity.
- A risk assessment schedule with mitigating plans of issues that could prevent the due completion date being met.

Throughout the development of the project design the Consulting Engineer shall consider the constructability of the design which shall also be reflected in the programme. Typical aspects and/or constraints that should be considered (but not limited to) are traffic volumes, time of day/year, workspace, weather, safety, environmental issues, and land acquisition issues.

1.3.10 Detailed Design Report

A detailed design report shall be submitted for discussion at the progress meeting. This report shall, as a minimum, cover all the duties as specified under Detail Design including:

- Deviations from standards, e.g., geometric, drainage, road classification, structures, etc.
- Geometric and capacity improvements
- Existing versus proposed X-section
- X-section development strategy – 20 years
- Intersection/interchange improvements
- Outcome of interaction with stakeholders
- Relocation of services
- Existing pavement condition and accepted pavement design
- Materials utilisation
- Geotechnical improvements
- Road furniture improvements
- Additional land requirements
- Drainage improvements

- New structures and any capacity improvements to existing structures (which includes bridges, major culverts, lesser culverts, walls, gantries, light masts and buildings)
- Comprehensive report on Land Acquisition

The sum tendered shall be full compensation for the time and cost to review the respective documents including all travel and subsistence costs, the costs of all written, telephonic and electronic communications and all other incidentals necessary to read, understand, create and express opinions and decisions from them, regardless of their quantity or complexity. It shall also include the submission of a report addressing the full review.
The rates tendered shall cover all costs associated in completing the individual tests and shall include for all calculations and reporting. Any tests proven to be erroneous shall not be paid for.

1.4 DESIGN DOCUMENTATION

1.4.1 Scope

This section covers the requirements and process for the compilation of tender documentation and invitation to tender for the Works Contract.

1.4.2 Tender Documentation

The following documents shall form the Tender Documents for the Works Contract:

i) **General Conditions of Contract for Construction Works, Third Edition (2015)'** issued by the South African Institution of Civil Engineering (abbreviated title 'General Conditions of Contract 2015' – 'GCC 2015'). This document is obtainable separately and Tenderers shall obtain their own copy

ii) The conditions of tender are the standard conditions of tender contained in Annex C of the Construction Industry Development Board Standard for Uniformity in Engineering and Construction Works Contracts, published in Government Gazette No. 42622 dated 8 August 2019

iii) **COTO Standard Specifications for Road and Bridge Works for South African Road Authorities, 2020 edition'.** This document is obtainable separately and Tenderers shall obtain their own copy.

iv) The Project Document, which includes Conditions of Tender, Particular Conditions of Contract, Scope of Works and Forms, all in accordance with the Client's standard proforma document.

In addition, Tenderers are advised, in their own interest, to obtain their own copies of the relevant Acts, Regulations and Standards referred to in this document as they are essential for the Tenderer to become acquainted with the basics of construction management, the implementation of preferential construction procurement policies, and participation of targeted enterprises and labour

1.4.3 Compilation of Final Tender Document

The Consulting Engineer shall adhere to the following process:

i) Compile and submit all relevant draft tender documentation for the purpose of discussion with the Client.

ii) Following to discussion of the draft documentation, the Consulting Engineer shall:
   - compile final documents incorporating all the amendments arising therefrom the discussion;
   - deliver the CD's/DVD's and paper copies to the Client's office before the tender document availability date specified in the Tender Notice and Invitation to Tender.

The tendered amount shall cover full compensation for time related costs associated with the compilation of the draft tender documents, discussion/meetings with the Client and subsequent finalisation of the tender documentation and the rate tendered shall include for all costs associated with

the compilation and writing of a CD/DVD of each full set of final tender documents and shall include for all expenditure on labour and materials, communication, postage and packaging incurred by the Consulting Engineer. In addition, the tendered amount shall cover the following:

Requirements and process for the Contractors' clarification meeting, tender period and evaluation of tenders received for the Works Contract.

i) Introduction of the team, including the Client's Project Manager and Procurement Officer, the Consulting Engineer's personnel, other Stakeholders, if any (for example, Provisional Government Officials, members of the PLC and the CLO).
ii) Describing the Conditions of Tender and Tender Data.
iii) Describing the Conditions of Contract and Contract Data.
iv) Describing the Works with as much detail as is required for specific items or operations.
v) Announce any amendments made to the tender documents.
vi) Providing a Client's email address for submission of any clarification questions.
ix) The estimate for the cost of the Works shall not be disclosed.

1.4.5 Tender Period

The Consulting Engineer shall in all cases only communicate, through the Client, with all tenderers during the tender period in accordance with Conditions of Tender for the works contract. The actions below need to be followed:

- Compiling for distributing by the Client minutes of the clarification briefing as an addendum at least 5 (five) working days before the date and time of tender closure.
- Attending to any technical queries or points of clarification requested by tenderers by providing questions and answers to the Client for distribution as part of any addenda.
- Compilation for distribution, by the Client and confirmation of receipt by all tenderers of any addenda to the Tender Document.
- Informing and obtaining approval from the Client of any unresolved enquiries, potential alternative proposals of which notice has been received from tenderers and changes to date for submission of tenders.

1.4.6 Tender Opening and Tender Evaluation

The Consulting Engineer shall be invited to the opening of tenders for the Works Contract. The Client will conduct the compliance of all tender responses and identify all responsive tenders. The Client will issue copies of the responsive tenders electronically to the Service Provide, including the Compliance evaluation report.

The Consulting Engineer shall evaluate all responsive tenders received from the Client and compile a consolidated Tender Evaluation Report for submission to the Client. During tender evaluation, the Consulting Engineer shall:

- Conduct the technical and financial analysis and risk assessment of postulated tender as well as alternative tenders.
- Advise tenderers, in terms of Conditions of Tender through the Client of any arithmetical, or other corrections made to errors in the extension of rates and/or totals in their tenders and the effect of such corrections and receive written acceptance of such corrections.
- Identify imbalanced rates and request acceptable explanations and/or adjustments thereof in terms of Conditions of Tender through the Client, which shall be considered in the tender evaluation process.
- Make available to the Client the lowest 5 (five) responsive tenders.

The Consulting Engineer shall, during the tender evaluation, liaise closely with the Client with respect to any possible disqualification of tenders or issues of a substantive nature identified prior to submission of the Tender Evaluation Report.

The Tender Evaluation Report shall conform to the requirement of the Client's proforma document with respect to content and format.

1.4.7 Alternative Tenders

The Client promotes the submission of appropriate/innovative alternative for the Works Contract. The Consulting Engineer shall liaise closely with the Client as to the acceptability/or otherwise of the principles of any alternative tenders proposed by a tenderer during the tender period.

1.4.8 Contract Documents for the Works

The Consulting Engineer shall, within 14 (fourteen) days of the date of the Letter of Acceptance prepare signed hard copies for the contract document.

The Employer' shall assess the performance guarantee provided by the Contractor for conformance with the proforma working in the tender documentation and if satisfied, shall thereafter submit it to the Client for safe keeping.

1.5 ADMINISTRATION AND MONITORING OF THE WORKS CONTRACT

1.5.1 Scope

This section covers the duties and obligations of the Consulting Engineer in the provision of the Employer's Agent and site supervisory staff for the administration, construction monitoring and measurement of the Works carried out by the Contractor appointed by the Client during the original Works Contract duration, extended duration and including prolonged site stoppages not under the control of the Client (i.e., Business Rescue or Community unrest).

1.5.2 Administration and Monitoring

a) Fulfilling the functions of the Employer's Agent

The appointed Employer's Agent for the project shall be that person listed in the tender as the Employer's Agent, who shall be authorized by the Consulting Engineer to carry out the work intended by the specifications and the duties required by the General conditions of contract (GCC).

The duties of the Employer's Agent shall be in accordance with the Client's standard requirements and shall, inter alia, include:

i) Conduct meetings with affected communities and relevant forums, if necessary, to establish communication channels and to determine issues impacting on the construction phase.
ii) Appointment of suitable, able, and competent site staff, together with the administration of such staff (including those of any independent Consulting Engineer/s as approved).
iii) Arranging and attending monthly technical and site meetings and keeping minutes of such meetings.
iv) Planning on behalf of the Client for the provision and reproduction of such drawings and documents as may be required by the contractor and site staff for the execution of the works.
v) Fulfilling all functions and obligations stated or implied for the Employer's Agent, and delegated to the Employer's Agent Representative, in the Client's Particular Conditions of Contract, Standard Specifications or Scope of Works or any other document applicable to the control and administration of a works contract.
vi) Issuing instructions to the Contractor, co-coordinating and generally inspecting the execution of the Works for compliance with the contract at such intervals as appropriate for the purpose of the proper inspection of the works, directing site staff and delegating the detailed and day-to-day supervision/inspection of the works and site administration.
vii) Advising the Client regarding the inspection and testing of such materials and plant as are usually inspected and tested and arranging for such inspection and testing to be carried out in accordance with current appropriate codes, manuals, and guidelines.

viii) Ensure regular inspections by the design specialists for all work on the project.
ix) Approve all materials and ensure compliance of materials mix designs to the specifications.
x) Actively manage, report, and assist the Contractor on training, development and empowerment programmes committed to by the Contractor in relation to his tendered Contract Participation Goals. Reporting and signing off on monthly basis the mentorship programme for Targeted Enterprises provided by the Contractor and ensuring that all needs of the Targeted Enterprises are recorded monthly and dealt with as the need arises. The monthly report shall be agreed with the Targeted Enterprises which shall also be signed by each Targeted Enterprise undergoing mentorship.
xi) Monitor and report on conformance to all relevant Occupational Health and Safety legislation including regular internal audits to be conducted by the Consulting Engineer's nominated specialist, arrangement for visits by the designer at identified critical phases of construction and recording/reporting of Section 24 incidents.
xii) Monitor and report on conformance to all relevant Environmental legislation and requirements.
xiii) Review and analyse claims and/or disputes or differences that may arise between the Client and Contractor. Present to the Client the Employer's Agent's review and analysis for discussion and consultation before the Employer's Agent's decision is made known to the Parties. All duties regarding disputes will be paid for under Additional duties.
xiv) Issuing works authorisations, as agreed with, and approved by the Client.
xv) Provide the Client with progress, monthly materials and laboratory and other reports on all aspects of material importance regarding the Works.
xvi) Identification of risks to the Client under the Works Contract, as well as communicating mitigations measures to the Client.
xvii) Provide the Client within 3 months of issuing the Completion Certificate of the works with such draft construction reports, materials as-built records, as-built plans in PDF format and all other documents normally associated with contract administration. The final reports/records shall be provided within 1 month of the issue of the Final Approval Certificate for the Works contract.
xviii) Certain construction monitoring duties may be delegated to the Employer's Agent's representative (RE).
xix) Receive the contractor's proposed programme, analyse it, comment on it and when found acceptable write to the contractor stating that the programme is acceptable.
xx) Declare structures (bridges, culverts, roads, sections of roads, etc.) safe for use in writing before it is opened for public use.

b) Head office administration

The Consulting Engineer shall supply sufficient head office administrative support to the site personnel to ensure efficient and timeous administration of the Works Contract.
The Consulting Engineer shall furthermore be responsible for the safe keeping of all original Roadworks and Structural Drawings as well as all other documentation related to the different phases of the project, for a period of at least 5 (five) years after the defect's notification period. No additional payment will be made for this.

c) Occupational Health and Safety obligations

The Consulting Engineer shall execute the duties of the Client, as his appointed agent, as contemplated in the Construction Regulations (2014) to the Occupational Health and Safety Act (Act No. 85 of 1993).

The Consulting Engineer shall arrange, formally and in writing, for the Works Contractor to provide documentary evidence of compliance with all the requirements of the said Act. The Consulting Engineer shall also carry out regular site audits to ensure compliance thereto. Should the Consulting Engineer not have "in-house" capacity to undertake such duties, an external recognized specialist shall be appointed. **This individual needs to be registered with the SACPCMP as a Professional Construction Health and Safety Agent or a Construction Health and Safety Manager.** Provision for payment for all OH&S obligations during the construction phase has been included in the Pricing Schedule.

d) Monthly Technical and Site Meetings

The appointed Employer's Agent for the project shall visit the site at least 2 (two) times per month on separate occasions. One visit shall be scheduled for the Technical Meeting with a thorough site inspection with the Contractor and the Employer's Agent's representative. A second visit shall be scheduled for the monthly Site Meeting with a thorough site inspection with the Contractor and Client's representative.

e) Compilation of monthly materials and laboratory report

The appointed Employer's Agent shall be responsible for the compilation of monthly materials and laboratory reports. These reports shall be in accordance with the Client's guideline documents. The site laboratory Consulting Engineer must supply the necessary information to be included in the report, but it will be the sole responsibility of the Employer's Agent to ensure that the information provided is true and correct. These reports shall be submitted to the Client's relevant Project Manager monthly, for the duration of the works contract. The reports shall be submitted in hard copy format. The reports shall reach the Client by no later than the 7th of the month. No additional payment will be made for this.

f) Site visits by Design Engineer

The appointed design specialist(s) for the project shall visit the site to comply with the Construction Regulations of the Occupational Health and Safety Act (No 85 of 1993) as relevant for the design of the Works during the construction phase as well as the designer's obligations with respect to the relevant professional engineer's legislation. Furthermore, the design specialist(s) shall as a minimum attend the construction of trial section including inter alia, stabilization trials, base construction trials and final surfacing trials. The design specialist for structures shall visit the site at least once a month whilst construction of the new bridge and the widening of the existing is in progress and whilst remedial works to existing structures is being carried out. It is also expected during the initial foundation stage of structures that the founding material (including for piles) for major culverts and bridges shall be inspected by an experienced geotechnical engineer. This means that for all major structures it is expected that the geotechnical engineer will do the initial approvals of foundation founding material monthly or more often as required.

g) Assistance at clarification meeting, tender period, and tender evaluation of sub-contract packages

The Consulting Engineer shall be required to assist the contractor with regards to the procurement of sub-contractors to comply with Part G of the Construction Contract.

h) Fulfilling the duties of the Senior Materials Technician/Materials Technician

The duties of the Senior Materials Technician/Materials Technician shall be in accordance with the Client's standard requirements and shall, inter alia, include:

i) Work in a close relationship with the laboratory including having regular discussions with the laboratory manager about the condition, progress, and standard of the laboratory.
ii) Conduct regular laboratory inspections and report and draft report.
iii) Act as liaison between the Employer's Agent's Representative and the laboratory.
iv) Advise the Employer's Agent's Representative where the laboratory does not comply with the contractual and technical requirements.
v) Prepare and sign-off materials mix and seal designs or any other relevant matter for submission to the Employer's Agent's Representative.
vi) Ensure the laboratory is granted sufficient time for sampling with regards to every request received.
vii) Inspect works daily which shall inter alia include materials sources, layer works, structures and any other materials related to items on site.
viii) Do visual inspections on materials in lots submitted for approval.
ix) Inspect all trial sections constructed and complete as well as record trial section checklists.
x) Draft the monthly materials and laboratory reports.
xi) Keep As-Built data up to date

1.5.3 Establishment of supervisory personnel on site

a) Supervisory team

The Consulting Engineer shall be required to provide a team on site to monitor, administer and measure the Works in accordance with the requirements of the Works Contract, Client's standard requirements and industry good practice.

Provision has been made in the Pricing Schedule for the envisaged staffing requirement. The establishment of such staff, however, shall be subject to the approval of the Client. For the envisaged scope of the Works, the supervisory team will consist of at least the following:

i) Employer's Agent Representative
ii) Assistant Employer's Agent Representative
iii) Senior Materials Technician
iv) Materials Technician
v) Trainee Technician
vi) Surveyor - full time
vii) Surveyor - part time
viii) Trainee (student)
ix) Community Liaison Officer

The minimum requirements for qualification and experience of the supervisory team are specified in Clause C3.1.11.

In the case of personnel charged out at a monthly rate, such as site and seconded staff, the rate shall be calculated as the GAR divided by 12 and multiplied by a factor of 1,65. The factor provides for 'Head Office' management, administration, stationery, leave and sick leave, training and development, professional indemnity costs, finance charges and profit. The 1,65 facts shall apply to both permanent employees and persons employed on a contract basis. There shall be and adjustment to the monthly rate for any leave on a pro rata basis

Replacement of staff because of any extended period of leave or sick leave outside the normal contractor's year end break shall be to the approval of the Client.
Three (3) months prior to the commencement of the works contract the Consulting Engineer shall submit for consideration and approval to the Client a detailed proposal which shall include a CV of appropriate experience and qualifications as well as a cost estimate (including salary adjustments/increases) for each required and/or proposed person.

The annual salaries for those approved staff shall be substantiated by an auditor's certificate at the start of the project and whenever salary or staff changes occur thereafter. Prior approval is required for any salary adjustments/increases which shall be in line with CPI.

Survey services may be required on either a full time or part time basis as appropriate for the scope of the Works.

Where provision has been made in the Pricing Schedule, the surveyor shall be appointed as a sub-Service Provider and procured directly by the Consulting Engineer in terms of Clause C9.7 (Consultant Remuneration Policy). The Consulting Engineer shall enter into a sub-service agreement with the surveyor. The terms of reference with regards to the survey service on site shall be based on the requirement of the Client as set out in Chapter 10 of Technical Methods for Highways TMH11: Standard Survey Methods.

The Client shall be entitled to instruct the Consulting Engineer to remove forthwith from the Works any person employed by the Consulting Engineer on or about the execution of the Works who, in the opinion of

the Client, misconducts himself or is incompetent or negligent in the proper performance of his duties, or whose presence on site is otherwise considered by the Client, on reasonable grounds, to be undesirable.

b) Site Accommodation

Appropriate housing for the supervisory team will be required to be provided by the Consulting Engineer. A Provisional Sum has been allowed in the Pricing Schedule for this purpose and should be less than or equal to **R7000,00** subjected to proven cost. Accommodation of the site staff shall be located as near to the Works as practically possible.

c) Establishment of site office

Provision for the erection and maintenance of a site office building and all related services will be made under the Works Contract. The Consulting Engineer shall, however, provide sufficient office equipment to perform all required duties for the monitoring of the Works Contract. This shall, inter alia, include the following:

- all cell phones,
- safety equipment in accordance with the OHS requirements, e.g., safety jackets, rotating amber lights, safety boots, etc.
- photo copiers, fax machines, modems, personal computers, and printers (including all hardware and software)
- consumables and stationery
- digital camera

One (1) landline, including rental, call and data costs for work related office and fax usage shall be provided through the Works Contract. Should fixed connectivity not be available mobile connectivity with data shall be provided through the Works Contract.

1.5.4 Monitoring of the Works Contract

The Consulting Engineer shall ensure that all the work required under the Works Contract is carried out in accordance with the requirements of the Works Contract and current best practice and shall include effective financial control. Construction monitoring shall be carried out in a pro-active manner and in accordance with the Client's standard requirements and current best practice.

The Consulting Engineer shall be responsible for the normal duties associated with the management and supervision of a works contract, which duties shall, *inter alia*, include:

- Monitoring and reporting of the Contractor's programme.
- Implement Employer's Agent's quality control plan.
- Monitor Contractor's quality control plan.
- Measurement and certification of completed work inclusive of cash flow forecasts.
- Provide a final cost estimate for the work contract monthly, including estimated costs of claims.
- Regular Site Meetings with Contractor and Client.
- Monitoring of the third-party claims.
- Monitoring and reporting of Contractor's CPG commitments.
- Supervision of traffic accommodation arrangements.
- Statutory control functions, which may include investigations into the legality of services and accesses without formal wayleave agreements and assist with the application for approval where required.
- Attend Project Liaison Committee (PLC)) and all other meetings relating to the Targeted Enterprises and Targeted Labour.
- Monitoring and reporting of the project's EMP and NEMA requirements.
- Implement the Employer's Agents requirements in terms of compliance with the OH&S Act.
- Monitor the Contractor's compliance with the OH&S Act.

1.5.5 Transport for site supervisory staff and additional services

The Consulting Engineer shall provide sufficient appropriate vehicles on site to carry out the duties as specified. Only travel in the execution of these duties, as well as any other travel necessary because of any additional duties as ordered by the Client, shall be claimable. Estimated travel costs because of week-end travel by site staff to their place of permanent residence shall be approved beforehand by the Client.

Travel log sheets for each vehicle utilised shall be certified by the Employer's Agent and included under cover of the payment certificates submitted to the Client. The kilometre rate for all travel more than 2400 kilometres per vehicle per calendar month shall be reduced and paid for at 25% of the rate.

The vehicle type for all supervisory staff shall be limited to a Category A and B with a 2500 Engine Volume cc in accordance with the table below, except for the surveyor, who shall be limited to over

2501 Engine Volume cc. In exceptional cases the Client may consider a different category vehicle and/or engine volume.
A Provisional Sum has been allowed in the Pricing Schedule for this purpose and should be less than or equal to **kilometres/month,** however the kilometre rate for all travel more than 2400 kilometres per vehicle per calendar month shall be reduced and paid for at 25% of the rate.

Vehicle Classes

A - Passenger motor cars and station wagons and 4x2 Double Cabs
B - Two-wheel drive light delivery vehicle, panel vans and other similar goods vehicles with a carrying capacity up to one metric ton

1.5.6 Community Liaison Officer (CLO)

The CLO is a person who acts as the liaison officer for the PLC

The contractor, after consultation with the Project Liaison Committee (PLC), shall appoint a competent local person as a Community Liaison Officer (CLO). The contractor shall appoint the CLO as part of his site personnel and shall direct all his liaison efforts with the local community through the appointed CLO.

The period of employment and the remuneration of the CLO shall be determined jointly by the contractor, the Employer's Agent and the Client.

The CLO shall:

(i) represent the community and assist the contractor, the Employer's Agent, and the Client with communication between them and the community.
(ii) work an 8-hour day with a total of 40 hours worked per week and shall be present on site each day except when performing off-site community liaison activities.
(iii) communicate daily with the contractor on labour related issues such as numbers and skill.
(iv) assist in the identification and screening of local labour from the community in accordance with the contractor's requirements.
(v) inform local labour of their conditions of employment, including their period of employment.
(vi) attend disciplinary proceedings involving local labour and ensure that hearings are fair and reasonable.
(vi) attend all meetings at which the community and/or local labour are present or are required to be represented.
(vii) attend monthly site meetings to report on community and local labour matters.
(viii) keep a daily written record of interviews and community liaison.
(ix) submit monthly returns regarding community liaison; and
(x) carry out all such other duties as agreed upon between all parties concerned.

A new pay item as indicated on the construction document of the schedule of quantities relating to the payment of the CLO on a provisional sum basis. Payment under this item shall be made only for the period for which the duties of the CLO are required, and not necessarily for the full duration of the contract.

1.6 CLOSE OUT

1.6.1 Scope

This section covers the fulfilling and completion of the project close-out including necessary documentation to facilitate effective completion, hand-over and operation of the project.

The Consulting Engineer shall administer the Works Contract during the period after the issuing of the Completion Certificate of the Works up to and including the issuing of the Final Approval Certificate to the Contractor and conclusion of the final payment certificate.

1.6.2 Routine Maintenance During Defect Period

The Consulting Engineer shall render services where the Contractor has been appointed by the Employer as part of the contract to carry out routine maintenance activities over the newly constructed section of the road during the defects liability period, the consultant will be required to review the identified maintenance activities which are deemed to be required timely by the Contractor and shall give written approval after discussing and receiving written letter from the Employer for approval before Contract undertakes the work. This routine maintenance responsibility shall include only the maintenance of the newly constructed road, and shall include maintenance of road furniture, fixtures and the like and shall typically comprise of grass cutting, the clearing and maintenance of drainage systems, repair of guardrails, repair of signs, replacement of road studs and road marking.

This routine maintenance shall exclude any repairs of defects in the works. Repairs of defects in the works shall remain the responsibility of the Contractor as per the contractual obligations.

1.6.3 Final Approval Certificate

The Consulting Engineer shall undertake a full inspection of the Works (which shall include the health and safety aspects as far as reasonably practicable) to identify any outstanding minor works, defects and/or damages for the compilation of a snag list. The inspection shall be undertaken by the Employer's Agent and his representative for the Works.

After the inspection and only when the Employer's Agent is of the opinion that a Final Approval Certificate can be issued, the Consulting Engineer shall arrange an on-site meeting and further inspection with representatives of the Client. At this meeting, parties will be presented with the snag list for consideration. There-after an inspection will follow with all the parties involved to add additional items to the snag list.

1.6.4 Construction records (As-builts) and Contract report(s)

The Consulting Engineer shall prepare and submit, in accordance with the Client's standard requirements, draft construction records reflecting the works as constructed as well as any deviations
from the designs as well as a draft contract report(s) providing information on how the contract was executed. Once reviewed and accepted by the Client the Consulting Engineer shall prepare and submit the final construction records and report(s).

1.6.5 Final Payment Certificate

Prior to the compilation of the final payment certificate the Employer's Agent shall ensure that all items on the Client's checklist are complied with. The signed off checklist shall be submitted with the final payment certificate.

The Employer's Agent shall only compile and submit the final payment certificate once the Final Approval Certificate has been issued by the Client and all unfulfilled financial obligations have been resolved.

1.6.6 Extended Guarantees

Where the Consulting Engineer is required to perform services (e.g. inspections after the completion date of the Works Contract) relating to extended guarantees for the Works Contract (e.g. Product Performance Guarantees) separate arrangements for remuneration will be made by the Client under Additional Duties.

C 4. MEASUREMENT AND PAYMENT

Item	Unit
1. Normal Fee Services	
(a) Percentage Fee based on the cost of works for **Road Upgrade** which includes Inception, Concept and Viability, Design Development, Documentation and Procurement, Contract Administration and Inspection and Close out.	Percentage (%)

The item amount will be determined by multiplying the estimated cost of construction provided by the Client to the percentage offered by the professional consultant engineering service provide. The estimated cost of construction will be adjusted at award of contractor and again at final completion of works where it is will be the actual cost of works.

Payment under **item 1. Normal Fee Service** will be done in 6 stages which are **Inception (5%), Concept and Viability (25%), Design Development (25%), Documentation and Procurement (15%), Contract Administration and Inspection (25%) and Close out (5%)**. The percentage allocation is per the ECSA Guideline Professional Fees.

A once off payment for the Inception stage shall be paid in full after the submission and approval of Gate 1 as per FIDPM Policy.

A once off payment for Concept and Viability stage shall be paid in full after the submission and approval of Gate 2 as per FIDPM Policy.

Payment for Design Development stage shall be paid in two payments. Half of the Design Development will be paid on the submission of the first complete draft and the remaining half shall be paid after the approval and closing of Gate 3 as per FIDPM Policy.

A once off payment for Documentation and Procurement shall be paid in full after the submission and approval of Gate 4 as per FIDPM Policy.

Payment for Contract Administration and Inspection shall be paid in segments, based on the cumulative percentage of construction work carried out on site.

Payment under stage 6 – Close out stage shall be paid in two payments. Half of the close out stage will be paid once Gate 6 of the FIDPM stage is Completed and Approved. The remaining half shall be paid once Gate 7 of the FIDPM stage is Complete and Approved.

All stages are as per FIDPM stages. FIDPM Gate 6 - Handover and Gate 7 – Close-out are combined to form ECSA stage 6 – Closeout of the Normal Fee Services.

(b) Percentage Fee based on the cost of works for **Structure** which includes Inception, Concept and Viability, Design Development, Documentation and Procurement, Contract Administration and Inspection and Close out.	Percentage (%)

The item amount will be determined by multiplying the estimated cost of construction provided by the Client to the percentage offered by the professional consultant engineering service provide. The estimated cost of construction will be adjusted at award of contractor and again at final completion of works where it is will be the actual cost of works.

Payment under **item 1. Normal Fee Service** will be done in 6 stages which are **Inception (5%), Concept and Viability (25%), Design Development (30%), Documentation and Procurement (10%), Contract Administration and Inspection (25%) and Close out (5%)**. The percentage allocation is per the ECSA Guideline Professional Fees.

A once off payment for the Inception stage shall be paid in full after the submission and approval of Gate 1 as per FIDPM Policy.

A once off payment for Concept and Viability stage shall be paid in full after the submission and approval of Gate 2 as per FIDPM Policy.

Payment for Design Development stage shall be paid in two payments. Half of the Design Development will be paid on the submission of the first complete draft and the remaining half shall be paid after the approval and closing of Gate 3 as per FIDPM Policy.

A once off payment for Documentation and Procurement shall be paid in full after the submission and approval of Gate 4 as per FIDPM Policy.

Payment for Contract Administration and Inspection shall be paid in segments, based on the cumulative percentage of construction work carried out on site.

Payment under stage 6 – Close out stage shall be paid in two payments. Half of the close out stage will be paid once Gate 6 of the FIDPM stage is Completed and Approved. The remaining half shall be paid once Gate 7 of the FIDPM stage is Complete and Approved.

All stages are as per FIDPM stages. FIDPM Gate 6 - Handover and Gate 7 – Close-out are combined to form ECSA stage 6 – Closeout of the Normal Fee Services.

Item		Unit
2.	**Administration and Monitoring**	
	(a) Office/ Design Team	
i)	Project Lead (Category B)	Hour (Hr)
ii)	Lead Design Engineer (Category C)	Hour (Hr)
iii)	Project Engineer/ Technician (Category D)	Hour (Hr)
	(b) (i) Office Team Travel Accommodation	Provisional Sum (P Sum)
	(ii) Mark-up on item 2(b)(i) above,	Percentage (%)
	(c) Construction Monitoring Team	
	i) Employers Agent (Category B)	Month (M)
	ii) Employers Agent Representative (Category C)	Month (M)
	iii) Site Engineer/ Technician (Category D)	Month (M)
	(d) Site Team Living Accommodation and Meals	Provisional Sum (P Sum)
	(e) Site Team Travel Accommodation	Provisional Sum (P Sum)
	(f) Mark-up in respect of the sum of item (d) and (e) above,	Percentage (%)

Under **item 2. (a) Office/ Design Team**, Provision has been made for the Office/Design staff whose services may be required during the implementation of the works. Category B personnel is regarded as the Project Lead, Category C shall be the Lead Designer and a Category D shall be his / her assistant for all project related matters. The unit of measure shall be Hour and a maximum of 20 hours per month for Category B and Category C can be claimed against the client while a maximum of 42 hours per month for a Category D. Time sheets signed by the employee claiming and his / her supervisor for work done and supporting documentation shall be attached to every payment certificate as proof when claiming under this

item. Category B, Category C and Category D should be persons with the characteristics listed under Clause 4.5 Time Based Fees, of the ECSA – rates as per Gazette 34875 Board Notice 206 of 2011 of the Engineering Profession Act, 2000, (Act No.46 of 2000).

A provisional sum under **item 2 (b) Office Team Travel Accommodation** has been allowed for meals and mileage for all project related matters. A Maximum of 1750 kilometers can be claimed per site staff per month at a rate per kilometer published by the Republic of South Africa, National Department of Transport under Private Rates which is updated from time to time. The maximum rate applicable shall be for vehicles up to and not greater than 2 500cc. For meals, R110 can be claimed for breakfast and R160 for lunch for site travels per day per person. Approved travel logs and meal receipts should be attached as proof to the payment certificated when claiming under this item.

Item 2. (c) Construction Monitoring Team, Category B personal is regarded as the Employers Agent, a Category C personal is regarded as the Resident Engineer / Employer's Agent Representative and all the other Category D personal under this item will be his / her assistances for all project related matters. The unit of measure shall be month. Time sheets signed by the employee claiming and his / her supervisor shall be attached to every payment certificate as proof when claiming under this item. Category B, Category C and Category D should be persons with the characteristics listed under Clause 4.5 Time Based Fees, of the ECSA – rates as per Gazette 34875 Board Notice 206 of 2011 of the Engineering Profession Act, 2000, (Act No.46 of 2000). The Client requires a Level 3: Full-time Construction Monitoring as per the ECSA Professional Fee Guideline, 2021 for the Employers Agent Representative.

A provisional sum under **item 2. (d) Site Team Living Accommodation and Meals and (e) Site Team Travel Accommodation** has be allowed for living accommodation, meals and mileage for all project related matters. A maximum of R7000 per month has been allocated per site staff for meals and living accommodation. A Maximum of 2400 kilometers can be claimed per site staff per month at a rate per kilometer published by the Republic of South Africa, National Department of Transport under Private Rates which is updated from time to time. The maximum rate applicable shall be for vehicles up to and not greater than 2 500cc. Approved travel logs, living accommodation receipts and meal receipts should be attached as proof to the payment certificated when claiming under this item. The living accommodation must not exceed 60 kilometers from the site.

Item 2 (f) - is a mark-up percentage for the total of (d) and (e) above for all overheads, charges, and profits in respect to handling of services.

Item	Unit
3. General Disbursements	
(a) Survey	Provisional Sum (P Sum)
(b) Geotechnical / Laboratory Services	Provisional Sum (P Sum)
(c) Environmental Consultant	Provisional Sum (P Sum)
(d) Health and Safety Consultant	Provisional Sum (P Sum)
(e) Land Expropriation Consultant	Provisional Sum (P Sum)

(f) Social Facilitation Services	Provisional Sum (P Sum)
(g) Dispute Settlement Services	Provisional Sum (P Sum)
(h) Targeted Training	Provisional Sum (P Sum)
(i) Project Liaison Committee	Provisional Sum (P Sum)
(j) Property Evaluation and Reimbursement	Provisional Sum (P Sum)
(k) Traffic Impact Assessment	Provisional Sum (P Sum)
(l) Maintenance during defects liability period	Provisional Sum (P Sum)
(m) Mark-up on the sub of item 3 for all overheads, charges and profit	Percentage (%)

The provisional sum under Item 3. (a), (b), (c), (d), (e), (f), (g), (h), (i), (j) and (k) will be utilised to assist the Consulting Engineer for services they cannot provide in fulfilling their duties. The utilisation of these disbursements requires pre-approval from the Client.

Item (a) Topographical Survey is an item set aside for conducting a Digital Terrain Model (DTM), Traffic counts and assessments, mechanical pavement assessments (Falling Weight Deflection, International Roughness Index and Rutting). Any addition survey required by the appointed service provided requires pre-approval from the Client as mentioned above.

Item 3. (b) Geotechnical / Laboratory Services shall be utilized for conducting geotechnical testing, slope investigations, foundation investigation, pavement investigation, material testing during design, construction and after.

Item 3. (c) Environmental Impact Assessment shall be utilized for environmental related issues which includes, conducting risked assessments, providing mitigation measures in avoiding the risk, providing a solution when an environmental incident has taken place, conducting regular site audits, assisting in the application of permits etc.

Item 3. (d) Health and Safety Consultant shall be utilized for Health and Safety related issues which includes, conducting risked assessments, providing mitigation measures in avoiding the risk, providing a solution when an environmental incident has taken place, conducting regular site audits, assisting in the application of permits etc.

Item 3. (e) Land Expropriation Consultant shall be utilized to conduct legal processes pertaining to land expropriation, survey the land required, evaluate the land in terms of value and benefit towards the department, negotiate with the landowner and assist in the procurement processes of the land required. **Consultation and approvals with the Client are required before utilizing this item.**

Item 3. (f) Social Facilitation Services shall be utilized to oversee the Client's community and economic development programs are implement in a lawful manner, equally and as prescribed by the Client. The services shall also be utilized for mediation purposes between the department and the affected party.

Item 3. (g) Dispute Settlement Services shall be utilized to resolve matters on behalf of the Client in acquiring a third party, members of the adjudication board, resources to take the matter to arbitration or court should there be any contractual dispute between the contractor and the Client.

Item 3. (h) Targeted Training is an item set aside to be utilised for any other training required and requested by the Client.

Item 3. (i) Project Liaison Committee shall be utilized for the payment of PLC member stipends as listed in the latest PLC Guideline Document, provide additional security in the PLC meeting if required and for refreshments severed in the PLC Meeting.

Item 3. (j) Property Evaluation and Reimbursement shall be utilized for payment before, during and after construction of any damage to property that's not owned by the Client, that is the results of the Client's fault. Proper legal, evaluation and negotiation process need to be followed before utilizing this item service provide should keep records of the before and after pictures for further evaluation, failure shall result in amount claimable from PSP. **Consultation and approval with the Client is required before utilizing this item.**

Item 3. (k) Traffic Impact Assessments it an item set aside for assessment of potential impacts of traffic changes which may be caused by either the Rehabilitation or any proposed developments within the area and to identify any infrastructure improvements or mitigation measures needed to ensure the road network will operate acceptably and safely upon completion of the proposed development through consultation and approval from the employer.

Item 3 (l) Maintenance during defects liability period shall be utilized if the Client has requested the services of the Consulting Engineer to monitor the maintenance activities of the Contractor who shall be appointed to implement the works. The Consulting Engineer shall be required to undertake assessments and identify any maintenance activities which may be required. The Consulting engineer shall inform the Client of this work. Upon approval from the Client, the Consulting Engineer shall then inform the appointed Contractor of the maintenance activity required and a measurement of this work.

The Consulting Engineer shall be responsible for quality control and the processing of the payment certificate for the maintenance activities.

Routine maintenance shall include maintenance of road furniture, fixtures and the like and shall typically comprise of grass cutting, the clearing and maintenance of drainage systems, repair of guardrails, repair of signs, replacement of road studs and road marking.

This routine maintenance shall exclude any repairs of defects in the works which occur during the defects liability period. Repairs of defects in the works shall remain the responsibility of the Contractor as per the

contractual obligations. These services shall be limited to 40 hours per month with a maximum rate of a Category D professional.

Item 3. (m) Mark-up on the sub of item 3 for all overheads, charges and profit is a percentage of the sum of money (Prov Sum items) against disbursement items listed under item 3 for the handling of services.

NOTE: *Consulting Engineer accreditation is a requirement under* ***item 3. General Disbursements***

NOTE: *For all provisional sums, an invoice and proof of payment / receipt is required when claiming for the item. The KZN DOT reserves the right to delay the payment certificate up until the invoice and proof of payment has been submitted.*

C5. CIDB CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

C 5.1. SCOPE

This part provides the specifications regarding the following:

(a) The Contract Skills Development Goals as per the Standard for developing skills through infrastructure contracts,2020 as gazetted in the Government Gazette No. 43495, 3 July 2020.

The below specifications are intended as a guide and are to be read in conjunction with the above-mentioned standards for the implementation of the programme.

C5.2. STANDARD FOR DEVELOPING SKILLS THROUGH INFRASTRUCTURE CONTRACTS

The South African government requires that its considerable expenditure on the delivery, maintenance, and operation of infrastructure (fixed assets that are constructed or result from construction operations) contribute to an increase in the number of people who have part or full occupational qualifications registered on the NQF or professional designations awarded by professional bodies or statutory councils.
The CIDB B.U.I.L.D Standard for developing skills through infrastructure contracts has been prepared to leverage contributions towards the increase of the pool of qualified skilled people, and where required professionally registered, through training on professional services, services, design and build or engineering and construction works contracts associated with such expenditure. This standard establishes a minimum contract skills development goal which is to be achieved in the performance of a contract in relation to the provision of different types of workplace opportunities linked to work associated with a contract which culminate in or lead to:
a) a part or full occupational qualification registered on the National Qualification Framework.
b) a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012).
c) a national diploma registered on the National Qualification Framework; and
d) registration in a professional category by one of the professional bodies listed in Table 1 below.

Table 1: Categories of registration

PROFESSION	CATEGORY OF REGISTRATION	ACT
Construction project management	Construction Project Manager	Project and Construction Management Professions Act of 2000 (Act No. 48 of 2000)
Engineering	Engineer, Engineering Technologist, Engineering Technician or Certificated Engineer	Engineering Profession Act of 2000 (Act No. 46 of 2000)

The Consulting Engineer shall be responsible for achieving the contract skills development goal and are provided with a number of methods for measuring their achievements. They may, if need be, devolve their obligations onto subconsultants.

C5.3. REQUIREMENTS

C5.3.1 CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

C5.3.1.1 The Consulting Engineer shall attain or exceed the contract skills development goal OF 0.25% in the performance of the contract or the execution of an order.

C5.3.1.2 Where required in terms of the contract, a specified proportion of the learners and candidates shall be selected from persons in the employ of the state who meet the relevant eligibility criteria for the relevant programme.

C5.3.1.3 Where required in terms of the contract or order, the Client shall advise the Consulting Engineer of the types of training to be undertaken by the learners and candidates based on the needs and requirements of the candidate's qualifications.

C5.3.2 ACHIEVING THE CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

C5.3.2.1 The Consulting Engineer shall achieve the measurable contract skills development goal by providing opportunities to learners requiring structured workplace learning using one or a combination of any of the following in relation to work directly related to the contract.

Method 1: structured workplace learning opportunities for learners towards the attainment of a part or a full occupational qualification.

Method 2: structured workplace learning opportunities for apprentices or another artisan learners towards the attainment of a trade qualification leading to a listed trade (GG No. 35625, 31 August 2012) subject to at least 60% of the artisan learners being holders of public TVET college qualifications.

Method 3: work integrated learning opportunities for University of Technology or Comprehensive University students completing their national diplomas.

Method 4: structured workplace learning opportunities for candidates towards registration in a professional category by a statutory council listed in Table 1 above.

C5.3.2.2 Employed learners may not account for more than 33 percent of the contract skills development goal.

C5.3.2.3 Not more than one method may be applied to any individual concurrently in the calculation of the contract skills development goal.

C5.3.3 CONTRACT SKILLS DEVELOPMENT GOAL CREDITS

C5.3.3.1 Contract skills development credits will not be awarded for learners enrolled as beneficiaries of other funded or subsidised programmes.

C5.3.3.2 In the case of engineering and construction works, design and build and services contracts:

a) The contract skills development goals shall be granted by multiplying the number of people employed by the contractors and placed for continuous training opportunities in a three-month period by the notional values contained in Table 3 as published in the Standard for developing skills through infrastructure contracts,2020 as gazetted in the Government Gazette No. 43495, 3 July 2020, or as revised in a Gazette notice.
b) The Consulting Engineer may source beneficiaries of the contract skills development goal from the CIDB Skills Development Agency (SDA).
c) All beneficiaries of the Standard must be registered with the CIDB SDA.

C5.3.4 DENIAL OF CREDITS

Credits towards the contract skills development goal shall be denied should:

a) the opportunities cannot be directly linked to the contract.
b) Failure to register all beneficiaries of the Standard be with the CIDB SDA.
c) Failure to submit a copy of the final contract compliance training report within 15 days of practical completion.
d) the following is not provided:
   1) the required contract compliance baseline plan, an interim contract compliance report or a final contract compliance report.
   2) the required mentorship plan for a candidate is not provided.
   3) the required training plan for learners are not provided.
   4) the training reports covering a period is not provided.
   5) the required records, specified documents and signatures are not provided.
   6) the structured mentorship is found not to be in accordance with the requirements of the applicable professional body, statutory council, or qualifying authority.
   7) the structured workplace learning is found not to be in accordance with the curriculum requirements of the part qualification or occupational qualification or prescription for professional registration for which the learner is registered.
e) conditions of employment and rates of allowances for learners are not in accordance with legislative provisions; and
f) the Consulting Engineer does not maintain the required training records, or an audit reveals that there is insufficient information to substantiate claims for credits.
g) the Consulting Engineer claims credits for learners enrolled as beneficiaries on programmes that are funded or subsidised from another source.
h) the Consulting Engineer fails to provide sufficient evidence of disciplinary actions taken against a learner who fails to present their interim reports or credentials for assessment when they have had sufficient structured work experience or structured mentorship to do so.

C5.4 COMPLIANCE WITH REQUIREMENTS

C5.4.1 GENERAL

C5.4.1.1 The Consulting Engineer shall submit to the Client:

a) within 30 days of the contract coming into effect or the issuing of an order, a contract compliance baseline training plan considering the skills mix and type of workers that are to be engaged.
   interim contract compliance training reports at intervals which do not exceed 3 months; and
b) a final contract compliance training report within 15 days of reaching practical completion of the construction works.

C5.4.1.2 The information contained in the final contract compliance training report shall include the contract skills development goal achieved (in Rands or in hours) in the performance of the contract and a breakdown of the goal achieved in respect of the following:

a) the name and contact details of the SDA,
b) the skills mix and skill types achieved on the contract; and
c) c) the names, ID numbers and period of employment of each learner and
d) candidate.

C5.4.1.3 The Consulting Engineer shall keep records of the hours worked and registration particulars towards

compliance with this standard. The Consulting Engineer shall allow the Client to inspect or audit such training records at any time.

C5.4.1.4 The Client shall undertake suitable random audits on records to confirm compliance with requirements.

C5.4.1.5 The learners shall be directly employed by the Consulting Engineer or SDA. The Consulting Engineer shall enter a contract agreement with the CIDB SDAs, training provider or skills development facilitator of their choice participating in the implementation of this standard to:

a) prepare training plans for registered learners, including details of the scope of experiential work to be covered and expected outcomes.
b) register learners with the appropriate Sector Education and Training Authority established in terms of the Skills Development Act of 2008 (Act 37 of 2008).
c) manage learner registration with appropriate trade testing authorities as well as preparation for the trade test.
d) liaise with the supervisor to monitor onsite training progress of learners.
e) liaise with the supervisor to arrange for summative assessments at appropriate stages of the training; and
f) liaise with the supervisor to prepare reports for the Client or Client's representative.

C5.4.2 STRUCTURED WORKPLACE LEARNING OPPORTUNITIES FOR LEARNERS

C5.4.2.1 Structured workplace learning opportunities shall be aligned to the curriculum requirements set for the part or full occupational qualification or professional designation for which the learner is registered.

C5.4.2.2 A responsible supervisor will be appointed to allocate learning tasks, under the guidance of a competent person, to learners in line with their training plans.

C5.4.2.3 Mentoring associated with structured workplace learning for artisan learners shall be Undertaken by an artisan in the applicable trade with a minimum of 3 years of trade specific experience. The number of artisan learners mentored by a single mentor shall, unless otherwise permitted by the National Artisan Moderation Body, not exceed 4 at any one time.

C5.4.2.4 Supervision associated with structured workplace learning for learners leading to a part or full occupational qualification other than artisan learners shall be undertaken by a person qualified in the applicable discipline with a minimum of 3 years of post-qualification experience.

C5.4.2.5 The Consulting Engineer shall submit to the Client, in respect of each learner:
a) within one month of commencing work directly related to the contract or order, a workplace training plan together with name of the learner's mentor and supervisor.

b) within one month of commencing work directly related to the contract or order:
1) proof of registration as a learner with the relevant SETA where applicable; and
2) a copy of the mentorship agreement entered with the learner, or the company mentorship agreement entered with the relevant qualified agency.

c) within two weeks of updating a workplace training plan, the revised workplace training plan.

d) a quarterly progress report and a final report at the end of the structured mentorship period including a log of exposure and interactions with the mentor in sufficient detail to demonstrate compliance with requirements, signed off by the mentor, the supervisor, and the learner.

C5.4.2.6 Learners shall be required by the mentor to complete training reports required by the relevant qualifying authority whenever a substantial activity or training period has been completed.

C5.4.2.7 The mentor and supervisor shall sign off all reports and logbooks to allow the learner to move to other projects or employment and continue the path towards a qualification.

C5.4.3 STRUCTURED WORKPLACE LEARNING FOR CANDIDATES

C5.4.3.1 Mentoring associated with structured workplace learning for candidates shall be in accordance with the prescripts of the relevant professional body or statutory council.

C5. 4.3.2 The Consulting Engineer shall:

a) appoint a supervisor who is actively engaged in work directly associated with the contract to issue tasks, oversee their implementation and provide input to the candidate on an on-going basis.

b) identify a suitable mentor for the candidate. If the contractor does not have an inhouse mentor, the contractor shall enter into a mentoring agreement with the candidate and an external company as required by the professional body or statutory council; and

c) issue each candidate with a portfolio of evidence file which is to be kept up to date with all the documentation issued or prepared including the workplace training plan and all revisions thereof as well as copies of the logbook entries and training experience reports.

C5.4.3.3 The mentor shall from time to time provide an updated workplace training plan for a candidate outlining the activities in which the candidate will be involved, including activities required by the relevant professional body or statutory council. The mentor shall require candidates to maintain a logbook issued by the relevant professional body or statutory council. The mentor shall sign off such logbook at quarterly presentations and progress review meetings.

NOTE: The mentor should ensure where the duration of the contract or order exceeds the minimum time to register in a professional category of registration that candidates are exposed to the full range of activities and work towards assuming the full level of responsibility recommended by the relevant professional body or statutory council. This may require rotations and secondments.

C5.4.3.4 The Consulting Engineer shall submit to the Client's representative, in respect of each candidate:
a) within one month of commencing work directly related to the contract or order:
1) a workplace training plan together with name of the candidates' mentor and supervisor.
2) proof of registration as a candidate with the relevant professional body or statutory council; and
3) register all beneficiaries of the Standard be with the CIDB SDA

b) within one month of commencing work directly related to the contract or order a copy of the mentorship agreement entered into with the candidate or the company mentorship agreement entered with a professional body or statutory council.

c) within two weeks of updating a workplace training plan, the revised workplace training plan.

d) quarterly progress reports and a final report at the end of the structured mentorship period including a log of exposure and interactions with the mentor in sufficient detail to demonstrate compliance with requirements, signed off by the mentor, the supervisor, and the candidate.

C5.4.3.5 Candidates shall be required by the mentor to complete training reports required by the relevant professional body or statutory council whenever a substantial activity or training period has been completed.

C5. 4.3.6 The mentor and supervisor shall sign off all reports and logbooks to allow the candidate to move to other projects or employment and continue the path towards registration where the work related to the contract ends for whatever reason prior to the candidate gaining sufficient experience for registration.

C5. 5 RECORDS

C5. 5.1 The Consulting Engineer shall submit all the documentation required in terms of clause 4 in a timely manner and according to a prescribed format where applicable.
The Consulting Engineer shall submit to the Client's Representative the following proformas as provided by CIDB:

- Form A2 Baseline Training Plan
- Form A3 Project Interim Report
- Form A5 Project Completion Report

C5. 5.2 The Client's representative shall certify the value of the credits counted towards the contract skills development goal, if any, whenever a claim for payment is issued to the Client and shall notify the contractor of this amount.

C5.5.3 The Consulting Engineer shall, upon termination of the opportunities provided to satisfy the contract skills development goal, certify the quantum and nature of the opportunity and submit the certificate, counter-certified by the relevant individual, to the Client's representative for record-keeping purposes.

C5.5.4 PRO-FORMA DOCUMENTS

The following is a list of Pro-Forma Documents as provided by CIDB which the Consulting Engineer shall utilise in relation to all the reporting requirements.

- Form A1 List of Recognised Skills Development Agencies
- Form A2 Baseline Training Plan
- Form A3 Project Interim Report
- Form A4 Supervisor Agreement
- Form A5 Project Completion Report

C5.6 SANCTIONS

C5. 6.1 In the event that the Consulting Engineer fails to substantiate that any failure to achieve the contract skills development goal was due to reasons beyond the Consulting Engineer's control which may be acceptable to the Client, the sanctions provided for in the contract shall apply.

C5.7 SCHEDULE C5: CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

Below are the typical payment items to be included in the Bill of Quantities for Item 4: CIDB Contract Skills Development Goals. The Number of employments under each method shall ONLY be decided upon after award and before design commences.

PROFESSIONAL ENGINEERING CONSULTING SERVICES FOR THE UPGRADE OF MAIN ROAD 75 (P75/2 from km 5.00 to km 20.437 and P75/3 from km 0.00 to km 5.43) IN THE UGU DISTRICT UNDER THE DURBAN REGION

CONTRACT NUMBER ZNB02212/00000/00/HOD/INF/23/T

SCHEDULE C5: CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

SECTION G

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT R
C5	**CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)**				
C5.01	(a) Employment of Leaners employed under Method 3				
	(i) Provision for stipends	Number			
	(ii) Provisions for mentorship	Number			
	(iii) Provisions for additional Costs	Number			
	(b) Employment of Leaners employed under Method 4				
	(i) Provision for stipends	Number			
	(ii) Provisions for mentorship	Number			
	(iii) Provisions for additional Costs	Number			
TOTAL					

C5.8 MEASUREMENT AND PAYMENT

Item **Unit**

C5.01 Payments associated with the Contract Skills Development Goals:

(a) Employment of Leaners employed under Method 3

(i) Provision for stipends..... Number (No.)

(ii) Provisions for mentorship..... Number (No.)

(iii)Provision for additional Costs..... Number (No.)

(d) Employment of Candidates employed under Method 4

(i) Provision for stipends..... Number (No.)

(ii) Provisions for mentorship..... Number (No.)

(iii) Provision for additional Costs..... Number (No.)

The payment items under subitem C5.01(a)(i) and (b)(i) shall be the stipends associated with each Number of Students/Learners/Candidates employed under each methods for the duration of the projects and shall be used to cover the cost of stipend payments made by the Consulting Engineer to the participants of the Skills Development Programme, including any associated COIDA and UIF payments, all as authorised by the Client.

The unit of measure for subitems G7.01 (c)(ii) and (d)(ii) shall be the Number (No) of mentors employed by the contractor to provide any mentorship for students and candidates employed under method 3 and 4, all as authorised by the Employer's Agent, and shall cover all associated costs for mentorship including travelling, preparation of reports, preparation and review of training plans and any other costs associated with the Mentor fulfilling the requirements of Clause C5.4.3

The provisional sum under subitem C5.01(a)(ii), (b)(ii), (c)(iii) and (d)(iii) shall be used to cover all costs associated with the provision personal protective equipment, insurance, medical assessments, course fees and trade tools (where applicable) and storage thereof, assessment, moderation and monitoring of learners., all as authorised by the Employer's Agent.

Where an unemployed learner is employed directly by the Client, the Client shall pay the stipend directly to the learner.

Where an unemployed learner is sourced through an SDA, training provider or skills development facilitator the Consulting Engineer must pay the stipend to the SDA, training provider or skills development facilitator who in turn will pay the learner.

The notional cost of providing training opportunities will be increase by CPI on an annual basis. The new, revised costs will be published on the CIDB website on the 1st April in each year.

The costs for providing training opportunities for this contract shall be as detailed in Table 3, and as published by CIDB on the Standards for Skills Development. The monthly and hourly rates shall be determined from the applicable Total Costs for each method.

Table 3: The notional cost of providing training opportunities per quarter

Type of Training Opportunity	Provision for stipends (Unemployed learners only)	Provisions for mentorship	Provisions for additional costs*	Total costs	
				Unemployed learners	Employed learners
Method 1					
Occupational qualification	R7 000	R0	R9 000	R16 000	R9 000
Method 2					
TVET College graduates	R14 000	R0	R9 000	R23 000	N/A
Apprenticeship	R14 000	R0	R12 000	R26 000	R12 000
Method 3					
P1 and P2 learners, or a 240 credits qualification	R24 000	R20 000	R4 500	R48 500	N/A
Method 4					
Candidates with a 360 credits qualification	R37 000	R20 000	R4 500	R61 500	R20 000
Candidates with 480 or more credits qualification	R47 000	R20 000	R4 500	R71 500	R20 000

PART C6 SITE INFORMATION

Position	South	East
Start km 5+000	30.40017°S	30.60744°E
End km 25+870	30.49583°S	30.51522°E