

CONTRACT

PART C1: AGREEMENTS AND CONTRACT DATA

PART C2: PRICING DATA

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CONTRACT

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PART C1: AGREEMENTS AND CONTRACT DATA

C1.1: FORM OF OFFER AND ACCEPTANCE

C1.1.1: OFFER

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

CONTRACT NO. ZNB02213/00000/00/HOD/INF/23/T: THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27+440 ON MAIN ROAD P52-3 IN ZULULAND UNDER EMPANGENI REGION.

The Tenderer, identified in the Offer signature block below, 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 authorised, signing this part of this Form of Offer and Acceptance, the Tenderer offers to perform all of the obligations and liabilities of the Contractor 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 prices inclusive of Value Added Tax is:

Amount in Words.....
.....
.....

R..... (in figures).

This Offer may be accepted by the Employer 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 Contractor in the Conditions of Contract identified in the Contract Data.

Signature: (of person authorised to sign the tender)

Name: (of signatory in capitals)

Capacity: (of signatory)

Name of Tenderer: (organisation)

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 Employer only

C1.1.2: ACCEPTANCE

By signing this part of the Form of Offer and Acceptance, the Employer, identified below, accepts the Tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor 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 Employer 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 Site Information

and the schedules, forms, drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 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 Employer 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 Employer's Agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data at, or just after, the date this Agreement comes into effect. 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 one fully completed original copy of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this Agreement, this Agreement shall constitute a binding contract between the parties.

Signature:

Name: *(in capitals)*

Capacity:

Name of Employer: *(organisation)*

Address:

.....

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

Date:

any confirmation, clarification or change to the terms of the offer agreed by the Tenderer and the Employer 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 EMPLOYER:

Signature:

Name:

Capacity:

Employer: *(Name and address of organisation)*

.....

Witness:

Signature:

Name:

Date:

C1.2: CONTRACT DATA

C1.2.1: CONDITIONS OF CONTRACT

C1.2.1.1 GENERAL CONDITIONS OF CONTRACT

This Contract will be based on the 'General Conditions of Contract for Construction Works, Third Edition (2015)', issued by the South African Institution of Civil Engineering (abbreviated title: 'GCC 2015').

It is agreed that the only variations from the GCC 2015 are those set out hereafter under "C1.2.1.2 SPECIAL CONDITIONS OF CONTRACT".

C1.2.1.2 SPECIAL CONDITIONS OF CONTRACT

C1.2.1.2.1 GENERAL

These Special Conditions of Contract (SCC) form an integral part of the Contract. The Special Conditions of Contract shall amplify, modify or supersede, as the case may be, the GCC 2015 to the extent specified below, and shall take precedence and shall govern.

The clauses of the Special Conditions of Contract hereafter are numbered "SCC" followed in each case by the number of the applicable clause or subclause in the GCC 2015, and the applicable heading, or (where a new special condition that has no relation to the existing clauses is introduced) by a number that follows after the last clause number in the GCC 2015, and an appropriate heading.

C1.2.1.2.2 AMENDMENTS TO THE GCC 2015

SCC 1.1 Definitions

SCC 1.1.1.14: *delete* "Commencement Date" *in the definition and substitute* "date of commencement of the Works".

Add the following to the end of Clause 1.1:

"SCC 1.1.1.35 "Construction Manager" means the person approved of in writing by the Employer's Agent, as the Contractor's representative on Site.

SCC 1.1.1.36 "Targeted Enterprise" means an enterprise as defined in PART F: Small Contractor Development of section C3.3 Particular Specifications in Part C3: Scope of Work.

SCC 1.1.1.37 "Targeted Labour" means labour as defined in PART F: Small Contractor Development of section C3.3 Particular Specifications in Part C3: Scope of Work."

SCC 4.1.1 Extent of Contractor's obligations

Add the following new paragraphs to the end of Clause 4.1.1:

"If the Contractor fails to achieve the monetary value of the contract participation goal stated in the Contract Data for local labour content in terms of PART E: Expanded Public Works Programme of section C3.3 Particular Specifications in Part C3: Scope of Work, the Contractor shall be liable to the Employer for a sum calculated in accordance with the Contract Data and the aforementioned Scope of Work as a penalty for such underachievement.

If the Contractor fails to achieve the monetary value of the contract participation goal stated in the Contract Data for contract participation by Targeted Enterprises in terms of PART F: Small Contractor Development of section C3.3 Particular Specifications in Part C3: Scope of Work, the Contractor shall be liable to the Employer for a sum calculated in accordance with the Contract Data and the aforementioned Scope of Work

as a penalty for such underachievement.”

SCC 4.4.2 Subcontractor to be approved

Add the following to Clause 4.4.2:

“The Contractor shall comply with the subcontracting restrictions stated in the Contract Data.”

SCC 4.10.1 Engagement of employees

Add the following to Clause 4.10.1:

“The contractor shall pay rates and wages, and observe conditions of labour, which are not lower than those established for the trade or industry where the work is carried out, as stated in the Contract Data.”

SCC 5.3.1 Commencement of the Works

Delete the first sentence of Clause 5.3.1 and substitute the following:

“The Employer’s Agent shall give the Contractor not less than 7 days’ notice of the date of commencement of the Works on which date the Contractor is instructed to commence carrying out the Works, save as may be otherwise provided in the Contract, or be legally or physically impossible. The date of commencement of the Works shall be within the period after the Commencement Date stated in the Contract Data.”

SCC 5.3.3 Time to instruct commencement of the Works

Delete Clause 5.3.3.

SCC 5.14.4 Certification of Completion

Insert the following in the first sentence after the words “has been duly completed,”:

“and the Contractor has submitted the information stated in the Contract Data,”.

SCC 5.14.6 Occupation by the Employer

Add the following to Clause 5.14.6:

“The use of any completed roadway or parts of the Works, whether for unhindered use by the public or for accommodation of traffic, while other parts are being constructed, shall not constitute occupation of the Works by the Employer.”

SCC 6.2.1 Delivery of security

In the last two lines of Clause 6.2.1, delete the words “the type of security for the due performance of the Contract, as selected in the Contract Data” and replace them with the words “a fixed performance guarantee as security for the due performance of the Contract in accordance with the Contract Data Part A: Data Provided by the Employer”.

Delete the entirety of Clause 6.2.2 and replace it with the following:

“SCC 6.2.2 Contractor failing to provide security

If the Contractor fails to provide the required fixed performance guarantee within the time period stated in the Contract Data, or if the performance guarantee shall differ substantially from the pro forma, it shall legally be deemed that the Contractor has selected a security of ten per cent retention of the value of the Works without limiting the Employer’s right to terminate the Contract in terms of Clause 9.2.”

SCC 6.2.3 Validity of performance guarantee

Delete the entirety of the first sentence of Clause 6.2.3 and replace it with the following:

“The Contractor shall ensure that the performance guarantee remains valid and enforceable until the Certificate of Completion is issued.”

SCC 6.10.4 Delivery, dissatisfaction with and payment of payment certificate

Delete “within 28 days” in the third sentence and substitute “within 30 days”.

SCC 6.10.8 Contractor’s completion statement

Delete “within 28 days” in the third sentence and substitute “within 30 days”.

SCC 6.10.9 Final Payment Certificate

Delete “within 28 days” in the second sentence and substitute “within 30 days”.

SCC 10.1.5 Employer’s Agent’s ruling on Contractor’s Claim

Delete “within 28 days” in the first sentence and in Clause 10.1.5.1, and substitute “within 56 days”.

C1.2.2: DATA PROVIDED BY THE EMPLOYER

The following contract specific data are applicable to this contract.

CLAUSE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER								
<p>1.</p> <p>1.1.1.13</p> <p>SCC 1.1.1.14</p> <p>1.1.1.26</p> <p>1.1.1.15</p> <p>1.2.1.2</p> <p>1.1.1.16</p> <p>1.2.1.2</p>	<p>GENERAL</p> <p>The Defects Liability Period is 12 months.</p> <p>The time for achieving Practical Completion is <u>30 months</u> from the date of commencement of the Works, including non-working days and special non-working days. This duration also includes the procurement of all contracts as part of the Indirect Targeting for Enterprise Development.</p> <p>Pricing Strategy: The Contract is to be a Re-measurement Contract.</p> <p>Name of Employer: Province of KwaZulu-Natal represented by Head of Department: Department of Transport</p> <p>Address of Employer:</p> <table border="0"> <tr> <td><u>Physical:</u></td> <td><u>Postal:</u></td> </tr> <tr> <td>172 Burger Street Pietermaritzburg 3201</td> <td>Private Bag X9043 Pietermaritzburg 3200</td> </tr> </table> <p>E-mail: Njabulo.Vezi@kzntransport.gov.za</p> <p>Telephone No: 033 355 8657 Fax No: 033 345 7537</p> <p>Name of Employer's Agent: Ibhongo Consulting (Pty) Ltd</p> <p>Address of Employer's Agent:</p> <table border="0"> <tr> <td><u>Physical:</u></td> <td><u>Postal:</u></td> </tr> <tr> <td>No 71 Fifth Avenue Morningside, Durban 4001</td> <td>Post Net Suite 279 Private BagX10, Musgrave 4001</td> </tr> </table> <p>E-mail: Themba@ibhongo.co.za</p> <p>Telephone No: 031 324 2200 Fax No: 031 324 2222</p>	<u>Physical:</u>	<u>Postal:</u>	172 Burger Street Pietermaritzburg 3201	Private Bag X9043 Pietermaritzburg 3200	<u>Physical:</u>	<u>Postal:</u>	No 71 Fifth Avenue Morningside, Durban 4001	Post Net Suite 279 Private BagX10, Musgrave 4001
<u>Physical:</u>	<u>Postal:</u>								
172 Burger Street Pietermaritzburg 3201	Private Bag X9043 Pietermaritzburg 3200								
<u>Physical:</u>	<u>Postal:</u>								
No 71 Fifth Avenue Morningside, Durban 4001	Post Net Suite 279 Private BagX10, Musgrave 4001								
<p>3.</p> <p>3.2.3</p>	<p>EMPLOYER'S AGENT</p> <p>The Employer's Agent is required to obtain the specific approval of the Employer before executing any of his functions or duties according to the following Clauses:</p> <p>SCC 5.3.1: Give the Contractor notice of the commencement date of the Works.</p> <p>6.3.1: Order any work as a Variation Order.</p> <p>6.3.1: Order any work which requires the utilisation of the provision for contingencies in the Contract Sum.</p> <p>6.3.1: Order any work which requires the Contract Price to exceed the Contract Sum.</p> <p>10.1.5: Ruling on a Contractor's claim.</p>								

CLAUSE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
<p>4.</p>	<p>CONTRACTOR'S GENERAL OBLIGATIONS</p>
<p>SCC 4.1.1</p>	<p>The contract participation goal for local labour content is <u>8.2%</u>.</p> <p>The penalty for failing to achieve the monetary value of the above target set by the Employer for local labour content in terms of PART E: Expanded Public Works Programme of section C3.3 Particular Specifications in Part C3: Scope of Work, is 5% of the monetary value by which the achieved monetary value falls short of the target monetary value.</p> <p>The contract participation goal for Targeted Enterprises is <u>30%</u>.</p> <p>The successful tenderer must subcontract a minimum of 30% of the value of the Constructions Works to Targeted Enterprises through Contract Participation Goals (CPG) for a bidder that is BEE Level 1 EME or QSE that is more than 51% owned by black person(s) in terms of the requirements of the cidb B.U.I.L.D Programme with respect to Indirect Targeting for Enterprise Development.</p> <p>The implementation of the Indirect Targeting for Enterprise Development shall be as per PART F: SMALL CONTRACTOR DEVELOPMENT of section C3.3 Particular Specifications in Part C3: Scope of Work and the Standard for Indirect Targeting for Enterprise Development through Construction Works Contracts, Published in the Government Gazette No. 36190 of 29 January 2013, issued in terms of sections 5(2) of the Construction Industry Development Board Act, 2000(Act no. 38 of 2000).</p> <p>The penalty for failing to achieve the monetary value of the above target set by the Employer for contract participation by Targeted Enterprises in terms of PART F: Small Contractor Development of section C3.3 Particular Specifications in Part C3: Scope of Work, is 5% of the monetary value by which the achieved monetary value falls short of the target monetary value.</p> <p>The Contractor may not subcontract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level of contributor than the Contractor, unless the contract is subcontracted to an EME that has the capability and ability to execute the subcontract.</p>
<p>SCC 4.4.2</p>	<p>The Contractor and his subcontractors shall be registered with the Bargaining Council for the Civil Engineering Industry and comply with the wage rates and conditions of labour agreed by the Bargaining Council for the Civil Engineering Industry, except where a specific industry publishes its own wage rates and conditions of labour.</p>
<p>SCC 4.10.1</p>	<p>The wage rates and conditions of labour employed under the Expanded Public Works Programme, shall comply with the Ministerial Determination 4, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No. R347 of 4 May 2012.</p> <p>The Standard for Skills Development is set at a maximum development support of 0.25% of the project's contract value as per the cidb B.U.I.L.D Programme.</p> <p>The successful tenderer must employ Learners from TVET colleges and universities by providing them with opportunities for workplace learning through placements, thereby acquiring work experience and young professionals seeking candidacy and registration through work placements.</p> <p>The wage rates and the implementation shall be as per the Standard for Developing Skills through Infrastructure Contracts, Published in the Government Gazette No. 43495</p>

CLAUSE	CONTRACT SPECIFIC DATA PROVIDED BY THE EMPLOYER
5.16.3	<p>(i) evidence that the local labour has been paid, and that the Targeted Enterprise subcontractors have received all amounts due in terms of their respective subcontract agreements; and</p> <p>(ii) the survey and materials information which the Employer's Agent requires to complete the as-built drawings and records.</p> <p>The latent defects period is 10 years.</p>
<p>6.</p> <p>SCC 6.2.1</p> <p>6.5.1.2.3</p> <p>6.8.2</p>	<p>PAYMENT AND RELATED MATTERS</p> <p>The security to be provided by the Contractor shall be:</p> <p style="padding-left: 40px;">Fixed Performance Guarantee of 8% of the first One Million Rand plus 3,5% of the balance of the Contract Sum.</p> <p>The percentage allowance to cover overhead charges is 10%.</p> <p>The value of payment certificates issued shall be adjusted in accordance with the Contract Price Adjustment Schedule with the following data.</p> <p>The values of the coefficients for calculating the Contract Price Adjustment Factor are:</p> <p style="padding-left: 40px;">Structures (Schedule B):</p> <p style="padding-left: 80px;">a = 0,15 b = 0,2 c = 0,55 d = 0,1</p> <p>"L", "P", "M" and "F" are defined as follows:</p> <p>"L" is the "Labour Index" and shall be the Consumer Price Index for "Geographic Indices > CPI per province > KwaZulu-Natal" as published in Table A of the Statistical Release P0141 of Statistics South Africa.</p> <p>"P" is the "Construction Equipment Index" and shall be the Construction Materials Price Index for "Plant and equipment" as published in Table 4 of the Statistical Release P0151.1 of Statistics South Africa.</p> <p>"M" is the "Materials Index" and shall be the Construction Materials Price Index as published in Table 6 of the Statistical Release P0151.1 of Statistics South Africa for:</p> <p style="padding-left: 40px;">Road works (Schedules A, E and F): "Civil engineering material – roads, general (excluding bitumen)"</p> <p style="padding-left: 40px;">Structures (Schedule B): "Civil engineering material – structures (excluding bitumen)"</p> <p>"F" is the "Fuel Index" and shall be the Producer Price Index for "Coke, petroleum, chemical, rubber and plastic products > Coal and petroleum products > Diesel" as published in Table 1 of the Statistical Release P0142.1 of Statistics South Africa.</p> <p>The base month is the month preceding the month of tender closure.</p> <p>Any index calculated by means of a linking factor between an old and new index, shall be rounded to one decimal place.</p>

C1.3: PERFORMANCE GUARANTEE

PRO FORMA

PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Third Edition (2015).

1. GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical address:

“Employer” means:

“Contractor” means:

“Employer’s Agent” means:

“Works” means:

“Site” means:

“Contract” means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

“Contract Sum” means: The accepted amount inclusive of tax of R

Amount in words:

“Guaranteed Sum” means: The maximum aggregate amount of R

Amount in words:

“Expiry Date” means: or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

2. CONTRACT DETAILS

Employer’s Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of Completion of the Works as defined in the Contract.

3. GUARANTOR’S LIABILITY

3.1 The Guarantor’s liability shall be limited to the amount of the Guaranteed Sum.

3.2 The Guarantor’s period of liability shall be from and including the date on which the Performance Guarantee is signed, up to and including the Expiry Date, or the date of issue by the Employer’s Agent of the Certificate of Completion of the Works, or the date of payment in full of the Guaranteed Sum, whichever occurs first.

3.3 The Employer’s Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

4. CONDITIONS APPLICABLE TO THIS PERFORMANCE GUARANTEE

4.1 The Guarantor hereby acknowledges that:

4.1.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.

4.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.

4.2 Subject to the Guarantor's maximum liability referred to in 3.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 4.2.1 to 4.2.3:

4.2.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 4.2.2;

4.2.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 4.2.1 and the sum certified has still not been paid;

4.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 4.2.

4.3 Subject to the Guarantor's maximum liability referred to in 3.1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:

4.3.1 the Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 4.3; or

4.3.2 a provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 4.3; and

4.3.3 the aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.

4.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 4.2 and 4.3 shall not exceed the Guarantor's maximum liability in terms of 3.1.

4.5 Where the Guarantor has made payment in terms of 4.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

4.6 Payment by the Guarantor in terms of 4.2 or 4.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.

4.7 Payment by the Guarantor in terms of 4.3 will only be made against the return of the original Performance Guarantee by the Employer.

4.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.

- 4.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 4.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 3.2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 4.11 This Performance Guarantee, with the required demand notices in terms of 4.2 or 4.3, shall be regarded as a liquid document for the purposes of obtaining a court order.
- 4.12 Where this Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrates' Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

C1.4: AGREEMENT IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY 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 EMPLOYER) of the one part, herein represented by:

.....

in his capacity as:

AND:

(hereinafter called the CONTRACTOR) of the other part, herein represented by:.....

.....

in his capacity as:

duly authorised to sign on behalf of the Contractor.

WHEREAS the CONTRACTOR is the Mandatary of the EMPLOYER in consequence of an agreement between the CONTRACTOR and the EMPLOYER in respect of:

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27+440 ON MAIN ROAD P52-3 IN ZULULAND UNDER EMPANGENI REGION.

for the construction, completion and maintenance of the works;

AND WHEREAS the EMPLOYER and the CONTRACTOR 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 CONTRACTOR undertakes to acquaint the appropriate officials and employees of the CONTRACTOR with all relevant provisions of the ACT and the regulations promulgated in terms thereof.
2. The CONTRACTOR undertakes to fully comply with all relevant duties, obligations and prohibitions imposed in terms of the ACT and Regulations: Provided that should the EMPLOYER have prescribed certain arrangements and procedures that same shall be observed and adhered to by the CONTRACTOR, his officials and employees. The CONTRACTOR shall bear the onus of acquainting himself/herself/itself with such arrangements and procedures.
3. The CONTRACTOR 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 CONTRACTOR expressly absolves the EMPLOYER and the EMPLOYER'S AGENT 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 CONTRACTOR agrees that any duly authorised officials of the EMPLOYER shall be entitled, although not obliged, to take such steps as may be necessary to ensure that the CONTRACTOR 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 CONTRACTOR, or to take such steps the EMPLOYER may deem necessary to remedy the default of the CONTRACTOR at the cost of the CONTRACTOR.

5. The CONTRACTOR shall be obliged to report forthwith to the EMPLOYER 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 **EMPLOYER**

on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

Thus signed at for and on behalf of the **CONTRACTOR**

on this the day of 20.....

SIGNATURE:

NAME AND SURNAME:

CAPACITY:

WITNESSES: 1.

2.

C1.5: RETENTION MONEY GUARANTEE

PRO FORMA

RETENTION MONEY GUARANTEE

THE HEAD: TRANSPORT
PROVINCE OF KWAZULU-NATAL
PRIVATE BAG X9043
PIETERMARITZBURG
3200

CONTRACT NO. _____ FOR _____

ISSUED TO: the **PROVINCE OF KWAZULU-NATAL**, represented by **HEAD: TRANSPORT** (hereinafter referred to as "the Employer")

ON BEHALF OF: (hereinafter referred to as "the Contractor")

In connection with

CONTRACT NO. ZNB (hereinafter referred to as "the Contract")

WHEREAS the Employer and the Contractor have agreed that the Contractor may provide a guarantee in lieu of the whole or portion of the retention monies provided for under the Contract;

NOW THEREFORE we, the undersigned, undertake, in accordance with the following provisions, to pay the Employer such amounts as the Employer may, from time to time, demand from us.

1. Each demand by the Employer shall be in writing signed by the Employer and delivered to us at

.....
or such other address as we shall in writing notify to the Employer and shall be accompanied by a certificate complying with Clause 2, signed by the Employer's Agent as such in terms of the Contract.

2. The Employer's Agent's certificate referred to in Clause 1 shall certify

- (a) that he is the Employer's Agent in terms of the Contract,
- (b) that the Contractor is in breach of his obligations under the Contract, and
- (c) that the amount demanded, which amount the certificate shall specify,

- (i) does not exceed the amount of retention monies which, but for this guarantee, would have been retained by the Employer in terms of the Contract at the date of the certificate, less the aggregate of the amounts of retention money actually retained by the Employer and the amounts previously paid by us to the Employer in terms hereof, and

- (ii) does not exceed a genuine estimate of the cost to the Employer of having the breach referred to in paragraph (b) remedied less the aggregate of any amounts withheld by the Employer from payments due the Contractor in terms of the Contract by reason of the breach referred to, and any amount in retention money actually held by the Employer save to the extent that the same had been deducted from any previous demand in terms hereof.

3. We shall within 28 days after our receipt of a demand complying with the provisions of Clauses 1 and 2 make payment to the Employer of the amount demanded at 172 Burger Street, Pietermaritzburg or at such other address as the Employer shall in writing notify us.

4. Subject to compliance with the provisions thereof, our liability to make the payments herein referred to shall be unconditional and shall not be affected nor diminished by any disputes, claims or counterclaims between the Employer and the Contractor.

5. Our aggregate liability under this guarantee is limited to R
6. This guarantee shall expire on the date on which the last of the retention monies, which but for this guarantee would have been retained by the Employer, becomes payable to the Contractor.
7. This guarantee is not transferable and must be produced for endorsement if any part payment is made and must be returned to us against final payment of our aggregate liability or on the date of the expiry of the guarantee in terms of Clause 6, whichever is the earlier.

Signed in the presence of the witnesses named hereunder:

At for and on behalf of

on this day of

Signature:

Capacity:

Address:

As Witnesses:

1. Name in Block Letters

2. Name in Block Letters

C1.6: TRANSFER OF RIGHTS

TRANSFER OF RIGHTS AND INDEMNITY

(To be completed during construction by successful Tenderer only)

Claim for Plant and materials on site, Payment Certificate No. Date:

Contract No: For (contract title)

I, the undersigned (name of signatory) in my capacity as
..... of (name of Contractor)

duly authorised hereto on behalf of the Contractor hereby transfer, cede and assign all the Contractor's rights, title and interest in and to the Plant and materials, for which evidence of bona fide ownership is attached hereto, unto and in favour of (name of Employer)

Insofar as the Contractor retains actual control of the materials and goods, the right of ownership thereof passes to the Employer by *constitutum possessorium*.

I herewith indemnify the Employer against any claim to and in respect of the said Plant and materials by reason of the Contractor's sequestration or liquidation or of any defect in the Contractor's title to the materials and agree that no payment for materials on site will be made by the Employer until such time as I have submitted documentary proof of bona fide ownership of the said Plant and materials.

This transfer shall become effective upon conclusion of the Contractor receiving payment from the Employer or from any other person on behalf of the Employer for the Plant and materials as Plant and materials on Site, payment of retention money thereon excluded.

I further confirm that I am fully responsible for all Plant and materials listed under this Transfer of Rights and that they have been insured adequately against all risks and will remain insured until they are built into or used in the permanent works and taken over by the Employer.

This certificate of Transfer of Rights applies only to the Plant and materials as listed in the following table.

DESCRIPTION OF ITEM	UNIT	QUANTITY	RATE	AMOUNT	SUPPLIER
TOTAL VALUE OF PLANT AND MATERIALS					

Signed by: Date:
for and on behalf of the Contractor.

Witnessed by:

NOTE: This form, together with the documentary proof of ownership or proof of payment by the Contractor to the supplier, shall accompany the Contractor's claim for payment for Plant and materials on site in terms of Clause 6.10.1.5 of the General Conditions of Contract 2015.

PART C2: PRICING DATA

C2.1 PRICING ASSUMPTIONS

1. GENERAL

The Bill of Quantities forms part of the Contract Documents and must be read and priced in conjunction with all the other documents comprising the Contract Documents, which include the Conditions of Tender, Conditions of Contract, the Specifications (including the Project Specifications) and the Drawings.

The contractor shall determine the contract skills participation goals, expressed in Rand, which shall not be less than the **SUB-TOTAL 1** multiplied by a percentage factor given in Table 2 in the Standard for the applicable class of construction works. For this contract, the percentage shall be 0.25%. This is indicated by the percentage factor in the Final Tender Summary section. **Minimum Contract Skills Development Goal (CSDG) sum = Civil Engineering CE (0.25%) x SUB – TOTAL 1** of the tender amount.

2. DESCRIPTION OF ITEMS IN THE SCHEDULE

The Bill of Quantities has been drawn up generally in accordance with the relevant provisions of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

The short descriptions of the items in the Bill of Quantities are for identification purposes only and the measurement and payment clause of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020. and the Particular Specifications, read together with the relevant clauses of the amendments and additions contained in the Project Specifications and directives on the drawings, set out what ancillary or associated work and activities are included in the rates for the operations specified.

The item numbers appearing in the Bill of Quantities refer to the corresponding item numbers in the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020. Item numbers prefixed by the letter PS refer to items of payment described in Part B Amendments to the Standard Specifications.

For the purposes of this Bill of Quantities, 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 specifications.

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

Rate: The payment per unit of measurement at which the Tenderer tenders to do the work.

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

Lump Sum: An amount tendered for an item, the extent of which is described in the Bill of Quantities, the specifications or elsewhere, but the quantity of work of which is not measured in any units.

3. QUANTITIES REFLECTED IN THE BILL OF QUANTITIES

The quantities given in the Bill of Quantities are estimates only and are subject to re-measure during the execution of the work. The quantities finally accepted and certified for payment, and not the quantities given in the Bill of Quantities, shall be used to determine payments to the Contractor. The Contractor shall obtain the Employer's Agent's detailed instructions for all work before ordering any materials or executing work or making arrangements for it. The quantities of material or work stated in the Bill of Quantities shall not be regarded as authorisation for the Contractor to order material or to

execute work.

The Works as finally completed in accordance with the Contract shall be measured and paid for as specified in the Bill of Quantities and in accordance with the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020, the Project Specifications and the Drawings. Unless otherwise stated, items are measured net in accordance with the Drawings, and no allowance has been made for waste. The validity of the contract will in no way be affected by differences between the quantities in the Bill of Quantities and the quantities finally certified for payment.

4. PROVISIONAL SUMS

Where Provisional sums or Prime Cost sums are provided for items in the Bill of Quantities, payment for the work done under such items will be made in accordance with Clause 6.6 of the General Conditions of Contract 2015. The Employer reserves the right, during the execution of the works, to adjust the stated amounts upwards or downwards according to the work actually done under the item, or the item may be omitted altogether, without affecting the validity of the Contract.

The Tenderer shall not under any circumstances whatsoever delete or amend any of the sums inserted by the Employer in the "Amount" column of the Bill of Quantities and in the Summary of the Bill of Quantities unless so ordered or authorised in writing by the Employer before closure of tenders. Any unauthorised changes made by the Tenderer to provisional items in the Bill of Quantities, or to the provisional percentages and sums in the Summary of the Bill of Quantities, at the Employer's discretion, may invalidate the Tenderer's offer or may be treated as arithmetical errors and the provisional items and percentages corrected without change to the Contract Sum.

5. PRICING OF THE BILL OF QUANTITIES

The prices and rates to be inserted by the Tenderer in the Bill of Quantities shall be the full inclusive prices to be paid by the Employer for the work described under the several items, and shall include full compensation for all costs and expenses that may be required in and for the completion and maintenance during the defects liability period of all the work described and as shown on the drawings as well as all overheads, profits, incidentals and the cost of all general risks, liabilities and obligations set forth or implied in the documents on which the Tender is based. The rates and lump sums shall be comprehensive in accordance with Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

Each item shall be priced and extended to the "Amount" column by the Tenderer, with the exception of the items for which only rates are required, or items which already have Prime Cost or Provisional Sums affixed thereto. If the Tenderer omits to price any items in the Bill of Quantities, then these items will be considered to have a nil rate or price.

All items for which terminology such as "inclusive" or "not applicable" have been added by the Tenderer will be regarded as having a nil rate which shall be valid irrespective of any change in quantities during the execution of the Contract.

Should the Tenderer group a number of items together and tender one lump sum for such group of items, this single lump sum shall apply to that group of items and not to each individual item.

The tendered lump sums and rates shall be valid irrespective of any change in the quantities during the execution of the contract.

The Tenderer shall fill in rates for all items where the words "rate only" appear in the "Amount" column. The provisions of subclause C1.1.3.6 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 shall apply to rate only items. "Rate Only" items have been included where:

- (a) an alternative item or material is contemplated;
- (b) variations of specified components in the make-up of a pay item may be expected; and
- (c) no work under the item is foreseen at tender stage but the possibility that such work may be

required is not excluded.

For "Rate Only" items, no quantities are given in the "Quantity" column, but the quoted rate shall apply in the event of work under this item being required. The Tenderer shall, however, note that in terms of the Tender Data the Tenderer may be asked to reconsider any such rates which the Employer may regard as imbalanced.

Reasonable compensation will be received where no pay item appears in respect of work required in terms of the Contract which is not covered in any other pay item.

All rates and amounts quoted in the Bill of Quantities shall be in Rands and cents and shall include all levies and taxes (other than VAT). VAT will be added in the summary of the Bill of Quantities. Note that fractions of a cent in all rates shall be omitted.

6. CORRECTION OF ENTRIES

Incorrect entries shall not be erased or obliterated with correction fluid but must be crossed out neatly. The correct figures must be entered above or adjacent to the deleted entry, and the alteration must be initialled by the Tenderer.

7. INTERIM PAYMENTS

Unless otherwise specified, progress payments in Interim Certificates, referred to in Clause 6.10 of the General Conditions of Contract 2015, in respect of "sum" items in the Bill of Quantities shall be by means of interim progress instalments assessed by the Employer's Agent and based on the measure in which the work actually carried out relates to the extent of the work to be executed by the Contractor.

Notwithstanding any custom to the contrary, the work as executed will be measured for payment in accordance with the methods described in the contract documents under the various items of payment.

Attention is directed to the provisions of Clause C1.1.2 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 regarding the measurement of quantities for payment. Except where specified otherwise, the nett measurements or mass of the finished work in place shall be taken for payment, but any quantity of work in excess of that prescribed shall be excluded.

8. ITEMS SCHEDULED FOR CONSTRUCTION USING LABOUR ENHANCED METHODS

Those parts of the Works to be constructed using labour enhanced methods are numbered with the specific COTO, Draft Standard (DS), October 2020 Specifications items in the Bill of Quantities.

9. UNITS OF MEASUREMENT

The units of measurement described in the Bill of Quantities are metric units. The following abbreviations are used in the Bill of Quantities:

mm	= millimetre	m ³ .km	= cubic metre kilometre	Prov sum	= provisional sum
m	= metre	l	= litre	kPa	= kilopascal
km	= kilometre	kl	= kilolitre	MPa	= megapascal
km.pass	= kilometre pass	kg	= kilogram	MN	= meganewton
m ²	= square metre	t	= ton (1 000 kg)	t.km	= ton kilometre
m ² .pass	= square metre pass	No	= number	h	= hour
ha	= hectare	%	= percent	dia	= diameter
m ³	= cubic metre	PC sum	= prime cost sum	Sum	= lump sum
kW	= kilowatt	MN.m	= meganewton metre		

10. CONSISTENCY OF RATES

In order to ensure that payments certified by the Employer's Agent are reasonably consistent with the market value of the work done, and that variations in quantities do not distort the contract valuation, the rates, prices and amounts tendered in the Bill of Quantities are required to be in balance.

A tender will be considered out of balance if:

- (i) the combined, extended total tendered for the item:

C1.3.1 The contractor's general obligations:

C1.3.1.1 Fixed obligations

C1.3.1.2 Value-related obligations

PSC1.3.1.3 Time-related obligations

exceeds a maximum of 15% of the Contract Sum (excluding contingencies, contract price adjustment and VAT).

- (ii) the rate, price or amount tendered for any other item differs by more than 20 (twenty) percent from the average of the rates, prices or amounts for the same item as tendered by those tenderers who submitted the lowest five responsive tender offers (or as tendered by all the responsive tenderers if there are less than five responsive tenderers).

Any such out of balance tender may be rejected if, after three (3) working days of having been given written notice by the Employer to adjust those rates or lump sums which are unreasonable or out of balance, the Tenderer fails to make the necessary satisfactory adjustments. These adjustments in rectification will be such that increases are balanced by decreases, leaving the tender offer unchanged.

C2.2 BILL OF QUANTITIES

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THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C1.2	GENERAL REQUIREMENTS AND PAYMENT						
C1.2.1	Environmental Management						
C1.2.1.1	Monitoring of compliance with and reporting on the EMP	month		30			
C1.2.1.2	Dedicated environmental officer (if specified in the Contract Documentation)	month		30			
C1.2.2	Programming and Reporting						
C1.2.2.4	Submission of a Scheme 2 Full Programme	L/Sum		1			
C1.2.2.5	Reviewing and updating a Scheme 2 Programme every month	month		30			
C1.2.2.6	Preparation and submission of all information and reports specified in the Contract Documentation	month		30			
C1.2.5	Safety						
C1.2.5.1	Health and safety plan	L/Sum		1			
C1.2.5.2	Implementation of health and safety plan	month		30			
C1.2.5	Safety						
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C1.3	CONTRACTOR'S SITE ESTABLISHMENT AND GENERAL OBLIGATIONS						
C1.3.1	The Contractor's general obligations						
C1.3.1.1	Fixed obligations	L/Sum		1			
C1.3.1.2	Value-related obligations	L/Sum		1			
C1.3.1.3	Time-related obligations	month		30			
C1.3.2	Contract sign boards	m ²	LI	12			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C1.4	FACILITIES FOR THE ENGINEER						
C1.4.1	Site accommodation						
C1.4.1.1	Offices and conference room	m ²		110			
C1.4.1.3	Open concrete working floors and verandas	m ²		120			
C1.4.1.4	Roofs over open concrete working floors and verandas	m ²		120			
C1.4.1.5	Storerooms inside the laboratory	m ²		6			
C1.4.1.6	Car ports	No		8			
C1.4.1.7	Ablution unit (flushable unit)	No		4			
C1.4.1.8	Change room with a shower	No		4			
C1.4.1.9	Kitchen unit (equipment as specified)	No		1			
C1.4.1.13	Rented housing paid for by the Contractor	P/Sum		1	500 000		
C1.4.1.14	Contractor's handling costs, profit and all other charges in respect of item C1.4.1.13	%		500,000			
C1.4.2	Items measured by area						
C1.4.2.1	Shelving as specified, complete with brackets	m ²		20			
C1.4.2.2	Work benches with a concrete slab top	m ²		20			
C1.4.2.3	Work benches with a wooden top	m ²		20			
C1.4.2.8	Notice boards	m ²		12			
C1.4.2.9	White boards	m ²		12			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C1.4	BROUGHT FORWARD FROM (PG 31)						
C1.4.2.11	Galvanised wire mesh fence 1.8m high with 2.0m x1.8m storeroom gate with padlock	m ²		2800			
C1.4.3	Items measured by number						
C1.4.3.1	Office swivel chair	No		4			
C1.4.3.2	Office chair	No		10			
C1.4.3.3	Draughtsman's stool	No		2			
C1.4.3.5	Office desk with 3 drawers (at least one lockable drawer)	No		3			
C1.4.3.7	Drawing table	No		1			
C1.4.3.8	Conference table	No		1			
C1.4.3.9	Bookcase	No		2			
C1.4.3.10	Filing cabinet	No		2			
C1.4.3.11	General purpose steel cabinet with shelves	No		2			
C1.4.3.13	220/250-volt power outlet plug point	No		4			
C1.4.3.14	400/231 volt 2-phase power outlet plug point	No		4			
C1.4.3.15	Single 1 500 mm, 58-watt fluorescent tube ceiling light	No		8			
C1.4.3.16	Single 1 500 mm, 22-watt LED tube ceiling light	No		8			
TOTAL CARRIED FORWARD TO (PG 33)							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
TOTAL BROUGHT FORWARD FROM (PG 32)							
C1.4.3.18	7-watt LED bulb ceiling light	No		8			
C1.4.3.19	Wash-hand basin	No		4			
C1.4.3.20	Laboratory basin	No		1			
C1.4.3.23	Fire extinguisher 9,0 kg, dry powder type	No		12			
C1.4.3.24	Air-conditioning unit	No		3			
C1.4.3.27	Wastepaper basket	No		4			
C1.4.3.29	A3 / A4 colour printer, copier, scanner	No		1			
C1.4.3.31	Rain gauge	No		2			
C1.4.3.32	Minimum / maximum atmospheric temperature gauge	No		2			
C1.4.3.35	3,0 m aluminium straight edge complete with two measuring wedges	No		1			
C1.4.3.36	Measuring wheel	No		1			
C1.4.3.37	First aid kit	No		1			
C1.4.3.38	Standpipe complete with 30m of 19 mm dia. Heavy duty hose pipe	No		4			
TOTAL CARRIED FORWARD TO (PG 34)							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
TOTAL BROUGHT FORWARD FROM (PG 33)							
C1.4.4	Prime cost items						
C1.4.4.1	Cell phones costs, including pro-rate rentals, for calls made in connection with contract administration	P/Sum		1	80 000.00		
C1.4.4.2	Handling cost and profit in respect of item C1.4.4.1	%		80000			
C1.4.4.5	The provision of internet connectivity and WIFI data for Engineer's site staff	P/Sum		1	15 000		00
C1.4.4.6	Handling cost and profit in respect of item C1.4.4.5	%		15 000			
C1.4.4.7	The provision of paper and ink for a combination colour printer/copier/scanner	P/Sum		1	50 000		00
C1.4.4.8	Handling cost and profit in respect of item C1.4.4.7	%		50 000			
C1.4.4.9	The provision of a complete 220/250-volt single phase electrical power installation, including all poles, insulators, wiring, switchboards, mains connection, meters, etc.	P/Sum		1	500000		00
C1.4.4.10	Handling cost and profit in respect of item C1.4.4.9	%		500000			
C1.4.5	Services at site offices, laboratories, and site accommodation						
C1.4.5.1	Fixed costs	L/Sum		1			
C1.4.5.2	Running costs	Month		30			
C1.4.6.2	Technical assistant	Month		30			
C1.4.7	Site inspection transport						
C1.4.7.1	Provision of a bus, mini-bus or combi van for site inspection purposes (18-seater vehicle)	Per/day		30			
C1.4.7.2	Travel on site	km		2 200			
TOTAL CARRIED FORWARD TO (PG 35)							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
TOTAL BROUGHT FORWARD FROM (PG 34)							
C1.4.8	Site security measures for the Engineer's facilities						
C1.4.8.1	Supply and installation of all required security measures at the Engineer's site offices and laboratories	L/Sum		1			
C1.4.8.2	Provision of security guards / watchmen and an armed response service at the Engineer's site offices and laboratories	Month		30			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C1.5	ACCOMMODATION OF TRAFFIC						
C1.5.2	Accommodation of vehicular traffic	month		30			
C1.5.3	Liaison with traffic authorities	month		30			
C1.5.4	Construction of temporary deviations						
C1.5.5.9	Grading of temporary deviations and existing roads used as detours	km		1			
C1.5.5.10	Watering of temporary deviations and existing roads used as detours	kl		2500			
C1.5.5.11	Other road maintenance work ordered by the Engineer	P/Sum		1	100000		
C1.5.5.12	Handling cost, profit and all other charges in respect of item C1.5.5.12	%		100000			
C1.5.7	Temporary traffic control facilities						
C1.5.7.1	Delineators including mounting bases and ballast:						
	(a) Single sided, reversible left or right	No	LI	350			
	(b) Double sided, reversible left or right	No	LI	1250			
C1.5.7.2	Traffic cones, minimum height 750 mm	No	LI	300			
C1.5.7.3	Flagmen	man-shift	LI	6894			
	(b) Flashing LED illuminated arrow board	No		10			
	(c) Illuminated road sign - R & TR series	No		12			
	(d) Illuminated road sign - TW series	No		2			
	(e) Mobile variable message sign	No		6			
	(f) Mobile variable message sign with a speed measuring and display capability	month		30			
TOTAL CARRIED FORWARD TO (PG 37)							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
TOTAL BROUGHT FORWARD FROM (PG36)							
C1.5.7.6	Maintenance of illuminated traffic signs:						
	(a) Sign mounted flashing amber lights (a pair of two lights mounted on a separate backing board)	month		30			
	(b) Flashing LED illuminated arrow board	month		30			
	(c) Illuminated road sign - R & TR series	month		30			
	(d) Illuminated road sign - TW series	month		30			
C1.5.7.9	Cleaning of traffic control facilities	month	LI	30			
C1.5.8	Traffic safety officer	Man-month	LI	30			
C1.5.9	Traffic safety vehicle	month	LI	30			
C1.5.11	Provision of safety equipment for visitors						
C1.5.11.1	Provision of reflective safety vests for visitors	No		20			
C1.5.11.2	Provision of hard hats for visitors	No		20			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C1.6	CLEARING AND GRUBBING						
C1.6.1	Clearing						
C1.6.1.1	Clearing with machines and some hand labour where necessary	ha	LI	2			
C1.6.1.2	Clearing with hand labour only when labour enhanced work is specified	ha	LI	1			
C1.6.2	Grubbing						
C1.6.3.1	Girth equal to or exceeding 1,0 m up to and including 2,0 m	No	LI	100			
C1.6.3.2	Girth exceeding 2,0 m up to and including 3,0 m	No	LI	50			
C1.6.9	Conservation of topsoil						
C1.6.9.1	Stockpiling topsoil	m ³	LI	7200			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C1.7	LOADING AND HAULING						
C1.7.1	Loading						
C1.7.1.1	Loading from stockpile using machines and some hand labour where necessary	m ³	LI	7 700			
C1.7.2	Hauling						
C1.7.2.1	Hauling material for use in the Works and off-loading it on the site of the Works:	m ³ - km		74 762			
C1.7.2.2	Hauling material to spoil and off-loading it at designated spoil or stockpile are:						
	(b) Soil and gravel material	m ³ - km		4000			
	(c) Boulders, hard material and concrete	m ³ - km		3700			
TOTAL CARRIED FORWARD TO SUMMARY							

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C2.1	GENERAL REQUIREMENTS AND TRENCHING FOR SERVICES						
C2.1.1	Location, Identification, and relocation of existing services						
C2.1.1.1	Contractors' obligations	L/Sum		1			
C2.1.1.2	Permanent services relocation or protection work by others	P/Sum		1	450000		
C2.1.1.3	Handling costs and profit in respect of item C2.1.1.2 above	%		450000			
C2.1.2.3	Survey to verify existing service positions	P/Sum		1	30 000		
C2.1.2.4	Handling costs and profit in respect of item C2.1.2 above	%		30000			
C2.1.2.5	Using hand excavation to locate, expose and verify services	m ³		100			
C2.1.3	Obtaining construction or work permits	L/Sum		1			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C12.1	PILING						
C12.1.1	Additional foundation investigations	P/Sum		1	150000		
C12.1.3	Establishment on site for piling	L/Sum		1			
C12.1.4	Moving to, and setting up equipment at each position for installing piles	No	LI	74			
C12.1.18	Manufacturing, supplying and delivering prefabricated piles	m	LI	74			
C12.1.19	Installation of prefabricated piles through material situated within the following successive depth ranges:						
C12.1.19.1	0 m up to 10 m	m	LI	552.42			
C12.1.19.2	Exceeding 10 m and up to 15 m	m	LI	233.20			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE A: BRIDGE

SECTION B

TEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C13.1	FOUNDATIONS						
C13.1.1	Provision of designs and drawings of temporary works by an ECSA-registered Professional Engineer or Technologist or Geotechnical Engineer (description of works to which applicable):	L/Sum		1			
C13.1.2	Additional foundation investigations:						
C13.1.2.1	Provisional sum allowed for additional foundation investigations	P/Sum		1	150000		
C13.1.2.2	Handling costs and profit in respect of item C13.1.2.1	%		150000			
C13.1.3	Excavation:						
C13.1.3.1	Excavating soft material situated within the following successive depth ranges:						
	(a) 0 m up to 1,5 m	m ³	LI	1500			
	(b) > 1,5 m and < 3,0 m	m ³	LI	1500			
	(c) > 3 m and < 4,5 m	m ³	LI	550			
C13.1.3.2	Extra over subitem C13.1.3.1 for excavation in hard material irrespective of depth	m ³		800			
C13.1.3.3	Extra over subitem C13.1.3.1 for additional excavation required by the Engineer after excavation is complete	m ³		165			
C13.1.3.4	Extra over subitem C13.1.3.1 for excavation by hand	m ³	LI	75			
C13.1.3.5	Extra over subitem C13.1.3.1 for excavation in restricted areas	m ³		75.00			
C13.1.6	Access and drainage:						
C13.1.6.1	Access	L/Sum		1			
C13.1.6.2	Drainage	L/Sum		1			
TOTAL CARRIED FORWARD TO (PG 41)							

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SCHEDULE A: BRIDGE

SECTION B

TEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
TOTAL BROUGHT FORWARD FROM (PG 42)							
C13.1.7	Backfill to excavations utilising:						
C13.1.7.1	Material from excavation	m ³	LI	4050			
C13.1.7.2	Imported material	m ³	LI	900			
C13.1.7.3	Soil cement	m ³	LI	90			
C13.1.12	Overbreak in excavation in hard material:	m ³		225			
C13.1.14.4	Mass concrete (class 15/19)	m ³	LI	135			
C13.1.14.5	Concrete blinding (75 mm thickness and class 15/19 of blinding)	m ³	LI	50			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT		
						R	C	
C13.2	FALSEWORK, FORMWORK AND CONCRETE FINISH							
C13.2.1	Formwork to provide (class of finish indicated as F1, F2, F3 or board) surface finish to (description of member to which applicable)							
C13.2.2	Vertical formwork to provide :							
	(a) Class F1 surface finish to:							
	(i) Pier bases	m ²	LI	375				
	(ii) Abutment bases	m ²	LI	125				
	(iii) Abutment walls	m ²	LI	220				
	(iv) Wingwalls	m ²	LI	150				
	(v) Apron Slab	m ²	LI	10				
	(b) Class F2 surface finish to:							
	(i) Pier Walls	m ²	LI	1 460				
	(ii) Abutment walls	m ²	LI	250				
	(iii) Pier caps sides and vertical ends	m ²	LI	345				
	(iv) Sides and ends of diaphragms	m ²	LI	355				
	(vi) Wingwalls	m ²	LI	155				
	() Apron Slab	m ²	LI	10				
C13.2.3	Horizontal formwork to provide:							
	(a) Class F1 surface finish to:							
	(i) Deck diaphragms	m ²	LI	120				
	(b) Class F2 surface finish to:							
	(ii) Deck cantilever soffit	m ²	LI	35				
TOTAL CARRIED FORWARD TO (PG 45)								

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
TOTAL BROUGHT FORWARD FROM (PG 44)							
C13.2.4	Inclined formwork to provide:						
	(a) Class F2 surface finish to:						
	(i) Abutment walls	m ²	LI	14			
	(a) Class F2 surface finish to:						
	(i) Wingwalls	m ²	LI	6			
	(ii) Pier cap soffit	m ²	LI	43			
C13.2.5	Permanent formwork						
	(i) Deck Beam	m ²	LI	1 300			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE B: BRIDGE

Section B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C13.3	STEEL REINFORCEMENT						
C13.3.1	(b) Reinforcement, High-yield-stress-steel bars for:						
C13.3.1.1	Abutment						
	(i) Foundation	t	LI	30			
	(ii) Walls	t	LI	45			
	(iii) Approach Slab	t	LI	3			
	Piers						
	(i) Foundations	t	LI	75			
	(ii) Walls	t	LI	110			
	(iii) Pier Caps	t	LI	25			
	Top Slab (Cast insitu deck slab)	t	LI	110			
	End Block	t	LI	3			
TOTAL CARRIED FORWARD TO SUMMARY							

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C13.4	CONCRETE						
C13.4.1	Cast in situ concrete						
C13.4.1.1	Strength concrete (Class 30/19):						
	(a) Indicate part of structure, class code and 28 day characteristic cylinder strength/characteristic compressive cube strength and nominal aggregate size	m ³					
	Class 30/20						
	(i) Cast in-situ deck slab	m ³	LI	528			
	(ii) Pier bases	m ³	LI	772			
	(iii) Abutment bases	m ³	LI	301			
	(iv) Pier Walls	m ³	LI	775			
	(v) Abutment walls	m ³	LI	354			
	(vi) Wing walls	m ³	LI	113			
	(vii) Pier caps	m ³	LI	215			
	(ix) Approach Slab	m ³	LI	29			
	(x) Parapets	m ³	LI	288			
	End Block	m ³	LI	12			
	Class 40/20						
	(xi) Deck (40 Mpa)	m ³	LI	170			
13.4.9	Manufacturing 40mpa precast beam members (3801-01)	No	LI	170			
13.4.11	Transporting and erecting of precast concrete member	No	LI	170			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C13.6	BEARINGS						
C13.6.1	Bearings:						
C13.6.1.1	Bearings (Elastometric Bearing, ref drawing 3801-30 & 3801-34)	No	LI	180			
C13.6.1.2	Provision of Engineering drawings of proprietary bearings and certification after installation, by an ECSA Registered Professional Engineer or Technologist.	Lump Sum		1			
C13.6.3	Bearing strips (25mm Foamed Polyethylene)	m ²	LI	65			
C13.6.4	(a) Dowels or guides	No	LI	20			
	(i) Unidirectional (ref dr. 3801-03, Detail 03 & 04)	No	LI	19			
	(ii) Multidirectional (ref dr. 3801-03, Detail 05)	No	LI	10			
	(iii) Fixed (ref dr. 3801-03, Detail 06)	No	LI	10			
C13.6.6	Installing the proprietary bearings (Laminated Elastometric Bearing, ref drawing 3801-30 & 3801-47)	No	LI	40			
TOTAL CARRIED FORWARD TO SUMMARY							

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C13.7	JOINTS						
C13.7.1	Expansion joints:						
C13.7.2.2	Filled on the deck with 20mm Jointex (ref 3801-38 typical Joint Details)	m	LI	165			
C13.7.3.2	Unfilled on parrapet (ref 3801-42)						
	(i) Parapet	No	LI	11			
C13.7.8	Additional water tests for joints ordered by the Engineer	No	LI	2			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C13.8	ANCILLARY STRUCTURAL ELEMENTS						
C13.8.1	Concrete barriers and parapets						
C13.8.1.1	Barriers						
C13.8.1.2	(a) External Parapets (ref draw:3801-41)	m	LI	181			
	(b) Internal Parapets (ref draw:3801-42)	m	LI	181			
	(c) External Parapets (ref draw:3801-43)	m	LI	181			
C13.8.2	End blocks (3000mm)	No	LI	4			
C13.8.3	Concrete transition blocks (length indicated)	No	LI				
C13.8.4	Concrete pedestrian railings	m	LI	181			
C13.8.5	Steel railings	m	LI	181			
C13.8.6	Service ducts in structures						
C13.8.6.1	110 dia PVC	m	LI	615			
C13.8.6.2	Joint in ducts at bridge deck expansion joints	No	LI	66			
C13.8.7	Numbers for structures: (ref to drawings 3801-41 & 42)		LI				
C13.8.7.3	Numbers formed in concrete	No	LI	2			
C13.8.8	Cast in situ no-fines concrete (class of concrete indicated)	No	LI	6			
C13.8.10	Drainage pipes and weep holes:						
C13.8.10.1	Drainage pipes:		LI				
	(a) 330 wide DN1 drainage strips (ref:3801-30)	m	LI	80			
TOTAL CARRIED FORWARD TO (PG 51)							

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SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
TOTAL BROUGHT FORWARD FROM 50							
C13.8.10.2	Weep holes: (b) 50mm Dia weephole at 1800mmc/c (drawing 3801-30)	No	LI	16			
C13.8.11	Drainage gulley's (drawing 3801-38)	No	LI	160			
C13.8.12	Synthetic-fibre filter fabric (Grade 2 Geofabric covering Strips and Wrapped Around Netlon Pipe)	m2	LI	150			
C13.8.15	Drainage strips ((330mm wide DN3 Netlon Drainage strips at 1800mm C/C attached to earth face of abutment at 45% to horizontal))	m	LI	80.00			
C.13.8.16	Perforated Drainage Pipe (M65 Netlon Drainage pipe wrapped in synthetic -filter fabric as specified in drawing -3801-30)	m	LI	30			
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

SCHEDULE A: BRIDGE

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
C20.1	TESTING MATERIALS AND JUDGEMENT OF WORKMANSHIP						
C20.1.1	Special tests on elastomeric bearings (150 % vertical load and 150 % shear distortion)	No	LI	198			
C20.1.2	Special tests requested by the Engineer						
C20.1.2.1	Employer's contribution to concrete durability tests						
	(a) Tests for water sorptivity	P/ Cost	LI	1	300000		
	(a.i) Handling costs and profit in respect of item C20.1.2.1(a)	%		300000	0.1		
TOTAL CARRIED FORWARD TO SUMMARY							

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SUMMARY OF SECTIONS

CHAPTER	DESCRIPTION	FROM PAGE	TOTAL AMOUNT
C1.2	GENERAL REQUIREMENTS AND PAYMENT	C29	
C1.3	CONTRACTOR'S SITE ESTABLISHMENT AND GENERAL OBLIGATIONS	C30	
C1.4	FACILITIES FOR THE ENGINEER	C31	
C1.5	ACCOMMODATION OF TRAFFIC	C36	
C1.6	CLEARING AND GRUBBING	C38	
C1.7	LOADING AND HAULING	C39	
C2.1	GENERAL REQUIREMENT AND TRENCHING FOR SERVICES	C40	
C12.1	PILING	C41	
C13.1	FOUNDATIONS	C42	
C13.2	FALSEWORK, FORMWORK AND CONCRETE FINISH	C44	
C13.3	STEEL REINFORCEMENT	C46	
C13.4	CONCRETE	C47	
C13.6	BEARINGS	C48	
C13.7	JOINTS	C49	
C13.8	ANCILLARY STRUCTURAL ELEMENTS	C50	
C20.1	TESTING MATERIAL AND JUDGEMENT	C52	
	TOTAL CARRIED FORWARD TO (PG C59)		R

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE A: BRIDGE

SECTION B

SCHEDULE D: DAYWORKS

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
D1000	D: DAYWORKS						
C1.2.8.1	Personnel						
	(a) Unskilled labourer	hour		1080			
	(b) Semi-skilled labourer	hour		1080			
	(c) Skilled labourer	hour		1080			
	(d) Gang leader	hour		1080			
	(e) Foreman	hour		1080			
	(f) Skilled Artisan	hour		1080			
C1.2.8.2	Construction Equipment						
	(a) Motor grader	hour		320			
	(b)Vibratory roller	hour		320			
	(c) Pneumatic roller	hour		320			
	(d)Front end loader backhoe	hour		320			
	(e)Excavator	hour		320			
	(f)Compressor	hour		320			
	(h)Other equipment	hour		320			
C1.2.8.3	Vehicles						
	(a) Light delivery vehicle	km		360			
	(b) Flatbed truck	km		400			
	(c) Dump Truck	km		360			
	(d) Other vehicles	km		360			
TOTAL CARRIED FORWARD TO (PG C55)							

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SCHEDULE A: BRIDGE

SECTION B

SCHEDULE D: DAYWORKS

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
TOTAL BROUGHT FORWARD FROM (PG 54)							
C1.2.8.4	Materials						
	(a) Procurement of materials	P/Sum		1	100 000		
	(b) Contractor's handling costs, profit and all other charges in respect of item C1.2.8.4(a)	%		100 000.00			
TOTAL CARRIED FORWARD TO SUMMARY							

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SCHEDULE E: EXPANDED PUBLIC WORKS PROGRAMME (EPWP)

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	C
E	EXPANDED PUBLIC WORKS PROGRAMME (EPWP)					
E6.01	(a) Provision of training venue facility, including the cost of transport the learners to and from this facility	P/Sum	1	300000		
	(b) Handling costs and profit in respect of subitem E6.01(a) above.	%	300 000			
E6.02	Training of learners employed by the contractor or by the Targeted Enterprise subcontractors:					
	(a) Generic Skills:					
	(i) Training costs	P/Sum	1	300000		
	(ii) Handling costs and profit in respect of subitem E6.02(a)(i) above.	%	300 000			
	(b) Entrepreneurial skills:					
	(i) Training costs	P/Sum	1	300000		
	(ii) Handling costs and profit in respect of subitem E6.02(b)(i) above.	%	300 000			
	(c) Construction skills:					
	(i) Training costs	P/Sum	1	300 000		
	(ii) Handling costs and profit in respect of subitem E6.02(c)(i) above.	%	300 000			
	(d) Transportation and accommodation costs of selected learners only, while receiving off-site training:					
	(i) Transportation and accommodation costs	P/Sum	1	300000		
	(ii) Handling costs and profit in respect of subitem E6.02(d)(i) above.	%	300000			
TOTAL CARRIED FORWARD TO (PG 57)						

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SCHEDULE E: EXPANDED PUBLIC WORKS PROGRAMME (EPWP)

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	ITEM
	TOTAL BROUGHT FORWARD FROM (PG C56)					
E6.03	Payments associated with the NYS programme:					
	(a) Employment of NYS workers	P/Sum	1	5 702 400		
	(b) Provision of tools and apparel for the NYS workers	P/Sum	1	150 000		
	(c) Handling cost and profit in respect of subitem E6.03(a) and (b) above	%	5 852 400			
	(d) Training of NYS workers:					
	(i) Provision of training for NYS workers	P/Sum	1	4 500 000		
	(ii) Handling costs and profit in respect of subitem sub item E6.03(d)(i) above	%	4 500 000			
	(e) Liaison with the Employer's project manager and the training service provider:					
	(i) Liaison conducted by the construction manager	hr	450			
	(ii) Liaison conducted by senior site foreman	hr	800			
	(f) Branding of EPWP PPE refer to page C160	P/ Sum	1	25 000		
	(i) Handling cost and profit in respect of subitem F5.03 (f) above	%	25000			
TOTAL CARRIED FORWARD TO SUMMARY						

THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27.440 IN THE ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE F: SMALL CONTRACTORS DEVELOPMENT

ITEM	DESCRIPTION	UNIT	QTY	RATE	AMOUNT	
					R	C
F	SMALL CONTRACTOR DEVELOPMENT					
F10.1	Procurement of Targeted Enterprises: (a) Management and execution of Targeted Enterprise procurement process: (i) Procurement process for the appointment of CIDB contractor grading designation 1 Targeted Enterprise subcontractor (100 copies of the tender document required for each individual tender) (ii) Procurement process for the appointment of CIDB contractor grading designation 2 Targeted Enterprise subcontractor (80 copies of the tender document required for each individual tender) (iii) Procurement process for the appointment of CIDB contractor grading designation 3 Targeted Enterprise subcontractor (60 copies of the tender document required for each individual tender) (iv) Procurement process for the appointment of CIDB contractor grading designation 4 Targeted Enterprise subcontractor (50 copies of the tender document required for each individual tender)	No	8			
		No	3			
		No	3			
		No	2			
F10.2	Construction Works for Targeted Enterprise subcontractors: (a) Payments associated with the construction Work carried out by Targeted Enterprise subcontractors (b) Handling costs and profit in respect of subitem F10.02(a) (c) Supply of materials and small construction equipment to assist Targeted Enterprise subcontractors (h) Handling costs and profit in respect of subitem F10.02(c) (e) Management of the Targeted Enterprise subcontractors	P/Sum	1	30 755 531.35		
		%	30 755 531.35			
		P/Sum	1	4 500 000		
		%	4 500 000			
		months	12			
TOTAL CARRIED FORWARD TO SUMMARY						

**PROVINCE OF KWAZULU-NATAL DEPARTMENT OF TRANSPORT
CONTRACT NO. ZNB02213/00000/00/HOD/INF/23/T
THE CONSTRUCTION OF MKUZE RIVER BRIDGE NO.3801 AT KM 27+440, ON MAIN ROAD P52-3 IN
ZULULAND UNDER EMPANGENI REGION.
TENDER SUMMARY**

DESCRIPTION	AMOUNT
Totals of Bill of Quantities brought forward:	
Schedule A: Mkuze River Bridge (b/f from page C53)	R
Schedule D: Dayworks (b/f from page C55)	R
Schedule E: Expanded Public Works Programme (b/f from page C57)	R
Schedule F: Small Contractor Development (b/f from page C58)	R
SUBTOTAL 1	R
<u>Add:</u> PART G: CONTRACT SKILLS DEVELOPMENT GOALS – CSDG (0.25% of SUBTOTAL 1)	R
SUBTOTAL 2 = (SUBTOTAL 1 + CSDG)	R
<u>Add:</u> Contingencies (10% of SUBTOTAL 2)	R
SUBTOTAL 3 = (SUBTOTAL 2 + CONTINGENCIES)	R
<u>Add:</u> Contract Price Adjustment - CPA (10% of SUBTOTAL 3)	R
SUBTOTAL 4 = (SUBTOTAL 3 + CPA)	R
<u>Add:</u> VAT (15% of SUBTOTAL 4)	R
TOTAL CARRIED FORWARD TO FORM OF OFFER C1.1.1	R

Signed on behalf of the Tenderer: (Signature)

Date:

Tenderer's Name: (Company Name)

SCHEDULE G: CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

ITEM	DESCRIPTION	UNIT	LI	QTY	RATE	AMOUNT	
						R	C
G	CONTRACTOR SKILLS DEVELOPMENT GOAL PARTICIPATION GOAL (CSDG)						
G7.01	(b) Employment of Leaners employed under Method 2:						
	(i) Provision for stipends		No	1			
	(ii) Provision for additional Costs		No	1			
	(c) Employment of Leaners employed under Method 3						
	(i) Provision for stipends		No	1			
	(ii) Provision for mentorship		No	1			
	(iii) Provisions for additional Costs		No	1			
	e) Liaison with the Employer's project manager and the training service provider:						
	i) Liaison conducted by the Construction Manager		hrs	306			
Total Brought Forward from Summary (Pg C57) – 0.25% of SUBTOTAL 1)							

PART C3: SCOPE OF WORK

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C3.1: STANDARD SPECIFICATIONS

The Standard Specifications on which this contract is based are the '**Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020**'.

C3.2: PROJECT SPECIFICATIONS

The Project Specifications, consisting of two parts, form an integral part of the Contract and supplement the Standard Specifications.

Part A contains a general description of the Works, the Site and the requirements to be met.

Part B contains variations, amendments and additions to the Standard Specifications and, if applicable, the Particular Specifications.

In the event of any discrepancy between a part or parts of the Standard or Particular Specifications and the Project Specifications, the Project Specifications shall take precedence. In the event of a discrepancy between the Specifications (including the Project Specifications) and the drawings and / or the Bill of Quantities, the discrepancy shall be resolved by the Employer's Agent before the execution of the work under the relevant item.

The Standard Specifications, which form part of this contract, have been written to cover all phases of work normally required for road contracts, and they may therefore cover items not applicable to this particular contract.

C3.2: PROJECT SPECIFICATIONS

PART A: GENERAL

1. DESCRIPTION OF THE WORKS

1.1 Employer's objectives

This Project forms part of the Province of KwaZulu-Natal Department of Transport's Upgrading Programme. The newly proposed Mkuze River bridge site is located adjacent to the existing bridge within the floodplain of the Mkuze River. The river has incised into the surrounding floodplain resulting in a total width of river, at the site of the proposed bridge, of approximately 120m from the western riverbank crest to the eastern riverbank crest. This Contract represents Phase 2 of the upgrading of P52-3. This major River crossing is located on km 27.5 of the P52-3. Mkuze River Bridge will be 180m long in total with 200m approaches on both end of the bridge.

The contract is located in a region of KwaZulu-Natal that has been historically impoverished by a lack of infrastructure access. It is therefore mandatory that the Contractor shall interact with the community via proactive project liaison with and project participation by its leaders and constituted organisations and forums, as well as through the employment of its people, and these activities shall constitute essential facets of the project.

The Employer's objectives in delivering public infrastructure and services for this project include the provision of temporary work opportunities to the local community through the application of labour-enhanced construction methods to the maximum extent feasible, in accordance with the Expanded Public Works Programme Guidelines.

The Contractor shall be required to attend meetings of the local Project Liaison Committee (PLC) from time to time. The requirements of the Expanded Public Works Programme (EPWP) are contained in PART E of section C3.3 Particular Specifications. These EPWP requirements also include provisions for the National Youth Service programme where applicable.

The requirements in terms of the CIDB B.U.I.L.D Programme with respect to Indirect Targeting for Enterprise Development are contained in PART F of section C3.3 Particular Specifications. The requirements in terms of the CIDB B.U.I.L.D Programme with respect to Skills Development are contained in PART G of section C3.3 Particular Specifications.

The Contractor shall be required to undertake maintenance activities of the newly constructed road for this contract during the defect liability period, as per the provisions of PSA 1.2.3.15 in the Project Specifications.

1.2 Location of the Works

The Work is located about 27.5km Northwest of Kwa Nongoma town along P52/3. It falls under the Pongola Local Municipality KN No.263, crossing the Mkuze River, extending with a 200m long approaches on both side of the bridge.

A locality map has been shown in Section C4.1 of the Site information page on page C295.

1.3 Overview of the Works

The project entails the construction of 180m long reinforced concrete bridge with 7 m carriageway, the lanes are 3.5 m wide in each direction, 1,5 m walkway on one side and 1,5 m shoulders on both ends. The project comprises the construction of 200 m approaches of 10,0 m width from layer works to blacktop associated with prism drainage.

The ground conditions of the project require pile oscillation on foundation to withstand the load imposed.

1.4 Extent of the Works

The Works to be carried out include the following main activities:

- (a) Establishment on site and clearing and grubbing.
- (b) Provision of traffic accommodation facilities.
- (c) Survey requirements.
- (d) Construction of Piles
- (e) Construction of Platforms
- (f) Construction of major Mkuze River Bridge
- (g) Construction of all pavement layer to the top of the G2 base, including priming to protect the G2 layer.
- (h) Road prism drainage.
- (i) Construction of 40mm Asphalt surfacing
- (j) Construction of erosion protection measures (gabions, stone pitching, etc.)
- (k) Installation of guardrails.
- (l) Finishing and cleaning up of the road and road reserve.
- (m) Road marking and installation of road studs
- (n) Continuous quality control over materials and workmanship, and compliance with the Particular Specifications with regard to environmental management and occupational health and safety, during all the above construction activities.
- (o) Removal of all site establishment facilities and constructional plant on completion of the Works.
- (p) Making good of any defects during the Defects Liability Period.

1.5 Detailed description of the Works

The following description is a broad outline of the works and does not limit the work to be executed by the Contractor in terms of the contract. The description of some of the major items indicated in this section are indicative, not absolute, and are provided to define in general terms the overall scope of the project.

The Employer requires the Contractor to establish the necessary machinery, equipment, methodology and personnel to carry out the construction of Mkuze River Bridge, inclusive of, but not necessarily limited to the main activities mentioned in Section 1.4.

The approximate quantities of each type of work to be carried out in accordance with the contract documents are listed in the Schedule of Quantities on the following tables.

The site shall not only comprise the proclaimed road reserve but shall be extended in the broader sense to take account of all areas occupied by the Contractor, be it deliberate or unintentional, in the execution of the contract. The site includes all the land within the proclaimed limits of the road reserve along the extent of the works, borrow pits and quarry sites, stockpile areas, locations set aside for construction and supervision accommodation and any other location required for the execution of the Works.

Incidental intrusion into private or tribal property outside the road reserve shall not be permitted without the owner's written authority. Any such agreement reached with a private or tribal landowner (occupier) shall include the proviso that any material or equipment on that site shall remain the exclusive property of the Employer in terms of the contract.

1.5.1 Access to the Site

Access to the site can be obtained from the constructed section of Main Road 52-3 between Nongoma and Pongola. Commencing at the intersection of P52-2 and P49-2 just Northwest of Nongoma, travel towards western direction, towards the St Benedict Hospital, turn right at km 5 of P52-2 and proceed along the constructed section of P52-3. The bridge is at km 27 340 to 27540, the total span of the work starts at km 27 140 to 27 740.

Throughout the duration of this contract, Main Road P52-3 shall be shared with other contractors engaged by the KwaZulu-Natal Department of Transport on this P52-3 project whose construction activities may affect access from time to time. The Contractor shall therefore be required to liaise on an ongoing basis with these other contractors with respect to access related matters throughout the duration of the contract.

1.5.2 Demolition work

The Contractor is not required to carry out any demolition work to existing structures.

1.5.3 Spoiling of surplus material

Surplus material shall be spoiled in designated areas approved by the Employer's Agent. The spoil material shall be disposed of in accordance with subclause A4.1.7.2(l) of the COTO Standard Specifications.

1.5.4 Quantities

The approximate leading quantities for the permanent Works to be constructed are as follows:

Description	Source	Approximate quantity
Pilling	Commercial source	74
Bearing	Commercial source	180
Pre-Cast Beams	Commercial source	170
Selected layers – G9 and G7	Stockpile/borrow – refer to materials report	1450 m ³
Selected material G7 –	Stockpile/borrow – refer to materials report	924 m ³
Stabilised subbase layer – G6	Commercial source	924 m ³
Base layer – G2	Commercial source – refer to	924 m ³
Concrete for lined drains	Commercial sources	400 m ³
Guardrails	Commercial sources	1 400 m

1.5.5 Material investigations

Materials information is furnished in section C4.4 at the end of this document.

1.5.6 Material sources, spoil and stockpile areas

The G9 and G7 materials for the lower and upper selected layers respectively shall be obtained either from borrow or from stockpile, and the material for the stabilised subbase layer shall be obtained from stockpile, all as described in the materials report in section C4.4.

The material for the G2 base and all concrete materials shall be obtained from commercial sources.

Spoil areas and areas for the temporary stockpiling of construction materials shall be determined and agreed on site in conjunction with the Employer's Agent, the PLC (where applicable) and the local communities (where applicable). The Contractor shall be permitted to use only these agreed spoil and stockpile areas, which shall be landscaped and vegetated on completion of the work.

1.5.7 Accommodation of traffic

The P52-3 is a lightly trafficked road. This project is located on an Abnormal Load Route and the requirements for the Contractor to comply with are e.g. maintain road width of 10 metres, or a height clearance of 4,75 m, or traffic deviations to be accessible for Abnormal Loads, or make provision for Abnormal Loads to travel over the Site in a safe manner.

The Contractor shall be required to accommodate traffic on the existing roadway at the beginning of approaches.

1.5.8 Accommodation of other contractors

Other contractors working on the site shall include:

CPG contractors

In order to ensure the smooth running of all contracts, the Contractor shall be required to liaise with, cooperate with and accommodate all other contractors working on the site, particularly when such other contractors are working in the same area simultaneously.

1.5.9 Existing services

There are no visible major services are expected to be encountered during the construction of the Works:

It is expected that unknown domestic services crossings requiring relocation or protection may be encountered along the route as the work proceeds. The Contractor shall make every effort to establish the location of these services in any area prior to excavations commencing in that area. Such efforts shall include diligent enquiry and discussions with adjacent landowners, visual surface inspection and exploratory trenching investigation as necessary.

1.5.10 Employer's Agent's site offices and laboratory

The Contractor shall be required to provide furnished site office facilities, laboratory facilities, ablution facilities, and carpools for the Employer's Agent at a site located in close proximity to the Contractor's office establishment and to the Works. A possible area for such site establishment shall be indicated at the Site Clarification Meeting.

1.5.11 Climate

The road is located in a high summer rainfall region with a 30 year mean annual precipitation of 750 mm.

1.5.12 Environment

The Contractor's attention is called to clause A1.2.3.3 of Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 and to the requirements of Part C: Environmental Management Specification contained in section C3.3 Particular Specifications.

1.5.13 Labour

A Project Liaison Committee (PLC) has been established and is a vital means of communication between all parties involved with the project. The composition of the PLC comprises representatives of the Employer, the Employer's Agent 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 will be also required to attend the monthly PLC meetings.

It is mandatory that the Contractor shall interact with the community via proactive project liaison and project participation by its leaders and constituted organisations and forums, as well as through the employment of its people, and these activities shall constitute essential facets of the project.

Local labour is to be used and the employment of such labour is to be done in conjunction with the PLC. The PLC has formed a Labour Committee who shall assist the Contractor with the recruitment of local labourers to ensure an equal distribution of people employed between the various Amakhosi in the area.

1.5.14 Labour-enhanced construction methods

Labour enhanced construction shall mean the economically efficient employment of as great a portion of local labour as is technically feasible to produce a standard of construction as demanded by the specifications with completion by the Due Completion Date, where local labour is the primary resource, supported by plant for activities that cannot be carried out feasibly by labour only.

Labour enhanced construction activities are to be planned as task-based work as a general rule. A task means a fixed quantity of work, to be performed to a clearly defined quality. Task-based work means work in which a worker is paid a fixed rate for performing a task, which is clearly defined in terms of quantity and

quality. Typically, a particular task can be completed within a working day.

Appropriate portions of the Works included in the Contract shall be carried out using labour enhanced construction methods.

Except where the use of equipment is essential in order, in the opinion of the Employer's Agent, to meet the specified requirements by the Due Completion Date, or where the use of equipment is essential as a result of occupational health and safety considerations, the Contractor shall use only hand tools and equipment in the construction of those portions of the Works that are required in terms of these Project Specifications to be constructed using labour enhanced construction methods.

Such portions of the Works shall be constructed utilizing only the local labour of the Contractor and/or the local labour of subcontractors, supplemented by the Contractor's key personnel to the extent necessary and unavoidable, unless otherwise instructed by the Employer's Agent and in accordance with the further provisions of the relevant sections of Part B of the Project Specifications.

Subject to considerations of occupational health and safety, and subject to the nature of the in situ materials being such that they can be excavated efficiently by hand, the portions of the Works to be carried out under supervision using labour enhanced construction methods are listed under the labour enhanced item numbers as per COTO -Draft Standard(DS) October 2020 specifications in the bill of quantities, include, but are not limited to, the following:

- Erection of the Contractor's and Employer's Agent's site establishment facilities;
- Provision of domestic services at the site establishment facilities;
- Provision of flagmen and labour for erecting traffic accommodation facilities;
- Clearing of the Site;
- Excavation for structures and open drains up to 1,5 m deep where the depth of the water table permits such excavation to be carried out safely, and the subsequent backfilling thereof;
- Bedding, selected fill, backfilling and compaction of all trenches for prefabricated culverts irrespective of depth, but assisted by mechanical compaction equipment in order to achieve the specified densities;
- Transportation and spoiling of all trench materials, where the disposal site is located within 20 metres of the source;
- Mixing and placing of concrete for the channel and backing to the prefabricated kerbs;
- Mixing and placing of concrete for concrete lined drains and sidewalks;
- Mixing and placing of concrete for minor drainage structures and road furniture structures;
- Mixing and placing of concrete for concrete edge beams at gravel road access points;
- Installation of prefabricated kerbs;
- Construction of all brickwork required for drainage structures and manholes;
- Erection of falsework and formwork;
- Fixing of reinforcement;
- Spreading of offloaded earthworks materials to the extent scheduled;
- Spreading of offloaded pavement layers materials to the extent scheduled;
- Spreading of stabilising agent;
- Surfacing;
- Excavation for and construction of stone pitching, and subsequent backfilling;
- Excavation for and construction of gabion boxes and mattresses, and subsequent backfilling;
- Excavation and subsequent backfilling for guardrail;
- Erection of guardrail;
- Excavation and subsequent backfilling for road signs;
- Erection of road signs;
- Spreading of topsoil;
- Planting of grass cuttings
- Cleaning and tidying up of the Site.

In respect of those portions of the Works which are not listed above, the construction methods adopted and the equipment utilized shall be at the discretion of the Contractor, provided always that the construction methods adopted and the equipment utilized by the Contractor are appropriate in respect of the nature of the Works to be executed and the standards to be achieved in terms of the Contract.

1.6 Temporary Works

The Temporary Works required under this Contract shall include the site camp and the site office, traffic accommodation measures implemented, the provision of drainage control, falsework and formwork during the construction of the major River Bridge, and the provision of any scaffolding or temporary propping used during the erection of the road signs.

All Temporary Works shall be removed from the Site on completion of the Contract.

1.7 Maintenance of the Works during the construction period

The Contractor shall take note of the various requirements of the General Conditions of Contract 2015 and the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 with respect to the care and protection of the Works.

The handing-over of the road reserve for this contract is described in clause A1.2.3 of Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020. The Contractor shall be responsible for maintaining this portion of the road from the date of hand-over until the issue of the Certificate of Practical Completion.

1.8 Testing of materials

A prime cost sum has been allowed in chapter 20 of the Bill of Quantities for all acceptance control testing laboratory work to be carried out by the Employer's Agent using the laboratory facilities which may include and/or commercial laboratory facilities.

The Contractor shall carry out at his own cost the required process control testing as specified in terms of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

1.9 Power supply and other services

The Contractor shall make his own arrangements concerning the supply of electrical power and all other services. No direct payment shall be made for the provision of electrical and other services. The cost thereof shall be deemed to be included in the rates and amounts tendered for the various items of work for which these services are required.

1.10 Construction in confined areas

It may be necessary for the Contractor to work within confined areas. Except where provided for in the specifications, no additional payment shall be made for work done in restricted areas. In certain places the width of the fill material and pavement layers may decrease to zero and the working space may be confined. The method of construction in these confined areas largely depends on the Contractor's constructional plant. However, the Contractor shall note that, unless otherwise provided for in terms of the scheduled payment items in the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 or these project specifications, measurement and payment shall be in accordance with the specified cross sections and dimensions only, irrespective of the method used for achieving these cross sections and dimensions, and that the tendered rates and amounts shall include full compensation for all special equipment and construction methods and for all difficulties encountered when working in confined areas and narrow widths, and at or around obstructions, and that no extra payment shall be made nor shall any claim for additional payment be considered in such cases.

1.11 Contractor's campsite (Project Specific)

Possible locations for a campsite shall be pointed out at the clarification meeting. (Project Specific Clarification meetings)

The Contractor shall make his own arrangements for the provision of his campsite and housing for construction personnel but the chosen site shall be subject to the approval of the Employer's Agent, the local authorities and, where applicable, the Project Liaison Committee (PLC) associated with the project.

The standard of the Contractor's camp, offices, accommodation, ablution, and other facilities must comply with the requirements of all local authority, environmental and industrial regulations concerned. In establishing and maintaining his campsite, due cognisance is to be taken of the requirements of clause A1.3.3 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

The Contractor is to fully familiarise himself with all local by-laws and Government regulations for the employment, transport and accommodation of labour on site.

The Contractor shall particularly note that there is a high risk of theft, vandalism and damage to property in this area and strict security will be required for all plant, establishment, temporary works and partially completed works. The Contractor shall be responsible for providing security for all plant, establishment, temporary works and partially completed works. No separate payment shall be made for the provision of such security since full compensation for these costs shall be deemed to be included in the amount tendered for item C1.3.1.3 (The contractor's general obligations: Time-related obligations).

1.12 Additional requirements for construction activities

The travelling public shall have the right of way on public roads, and the Contractor shall make use of approved methods to control the movement of his equipment and vehicles so as not to constitute a hazard on the road.

The Contractor's tendered rates shall include full compensation for all costs which may arise from the construction and maintenance of deviations and construction under traffic. No claim for additional costs which may arise from these methods of traffic accommodation and no additional payment owing to inconvenience as a result of the Contractor's method of working shall be considered.

1.13 Construction programme

The Contractor shall submit a detailed time programme in accordance with clause 5.6.2 of the General Conditions of Contract 2015, clause A1.2.7 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

In addition to any other restrictions accommodated by the Contractor in compiling the construction programme, the following constraints shall be taken into account in the preparation thereof:

- (a) The whole of the Works (and the portions of the Works if completion in portions is required) shall be completed within the time period(s) stated (refer to the Contract Data in section C1.2.2).
- (b) Working days lost due to abnormal rainfall shall be treated as set out in clause A1.2.3.4 (b)
- (c) Allowance shall be made for non-working days and special non-working days (refer to the Contract Data in section C1.2.2).
- (d) Construction activities must comply with all the specified environmental requirements including clause A1.2.3.3 of Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 and the requirements of Part C: Environmental Management Specification contained in section C3.3 Particular Specifications.
- (e) Construction activities must comply with all the specified health and safety obligations including the requirements of Part D: OHS 1993 Health and Safety Specification contained in section C3.3 Particular Specifications.
- (f) Strict control of access to and from local public roads shall be required when construction vehicles, plant or equipment leave or enter the site.
- (g) Throughout the contract period traffic must be accommodated through the site and all other contractors engaged on the construction of identified roads must be accommodated.
- (h) The Contractor's programme of work shall take due cognisance of risks by limiting the duration of the

exposure of the various construction elements to natural phenomena.

PRELIMINARY CONSTRUCTION PROGRAMME

ACTIVITIES	P52-3: 30 MONTHS																													
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Construction of Mkuze River Bridge on main road 52-3																														
Commencement meeting and PLC																														
Contractual Document																														
Site Establishment																														
NYS Training																														
6 Months class																														
6 Months on site																														
Construction of Mkuze River Bridge																														
Clearing and grubbing																														
Mass Earthworks																														
Construction of Platform & excavations																														
Pilling																														
Foundations																														
Abutments																														
Piers																														
Casting of the Beams																														
Beam Installation																														
Deck																														
Parapet																														
Surfacing																														
Cut /Fill																														
Layer works																														
Lower selected layers(G9&G7)																														
Upper selected layers(G6)																														
Upper selected layers(G2)																														
Ancillary works																														
Road Marking and road signs																														
Snag list																														
De-establishment																														

2. DRAWINGS

The drawings that form part of the Tender documents are issued on a CD and shall be used for Tender purposes only.

The Contractor will be supplied with three complete sets of A0 paper print drawings, and one set of drawings on a CD. These A0 paper prints and CD are issued free of charge and the Contractor shall make any additional copies he may require at his own cost.

Any information in the possession of the Contractor which the Employer's Agent requires to complete the as-built drawings shall be supplied to the Employer's Agent before a certificate of completion will be issued.

Only figured dimensions shall be used and drawings shall not be scaled unless so instructed by the Employer's Agent. The Employer's Agent will supply all figures / dimensions omitted from the drawings.

The levels given on the drawings are subject to confirmation on site, and the Contractor shall submit all levels to the Employer's Agent for confirmation before he commences any structural construction work. The Contractor shall also check all clearances given on the drawings and shall inform the Employer's Agent of any discrepancies.

3. PROCUREMENT

The contractor shall procure goods and services under provisional sums and prime cost sums according to the Employer's standards.

4. CONSTRUCTION

4.1 Applicable SANS 2001 standards for construction work

All construction work must conform with the relevant SABS or SANS specifications referred to in the 'Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020', or in Section C3.2 Project Specifications, Part B: Amendments to the Standard Specifications, of this document.

4.2 Applicable national and international standards

All construction work must be undertaken in accordance with the 'Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 and as amended in Section C3.2 Project Specifications, Part B: Amendments to the Standard Specifications, of this document.

4.3 Particular / generic specifications

As well as the 'Amendments to the Standard Specifications' contained in Part B of Section C3.2 Project Specifications, of this document, the following Particular Specifications as contained in Section C3.3, are applicable to this Contract:

- Part C: Environmental Management Specification
- Part D: OHSA 1993 Health and Safety Specification
- Part E: Expanded Public Works Programme
- Part F: Small Contractor Development

The 'General Conditions of Contract for Construction Works, Third Edition (2015)', published by the South African Institution of Civil Engineering which is applicable to this Contract.

4.4 Certification by recognized bodies

No certification of items included in the Works is required.

4.5 Plant and materials provided by the Employer

No plant and materials are to be provided by the Employer.

4.6 Services and facilities provided by the Employer

The Employer's Agent's site office and laboratory facilities will be paid for in terms of the Contract. No other services or facilities are to be provided by the Employer.

5. MANAGEMENT

5.1 Applicable SANS 1921 standards

The following parts of SANS 1921 and associated specification data are applicable:

5.1.1 SANS 1921-1 Part 1: General engineering and construction works

Specification data associated with SANS 1921-1	
Clause No.	Essential data
4.1.7	There are no requirements for drawings, information and calculations for which the Contractor is responsible.
4.2.1	The responsibility strategy assigned to the Contractor for the works is 'A'.
4.3.1	The programme must conform to clause A1.2.7.1 (Scheme 2) 'Programme of Work' of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 and clause 5.6 'Programme' of the 'General Conditions of Contract 2015'.
4.3.3	The Contractor must give 24 hours' notice for inspection of work that is to be covered up.
4.7.3	Where applicable, the Contractor is afforded the opportunity of pricing an item to cover costs of unavoidable over-break.
4.12.2	The samples of materials, workmanship and finishes that the Contractor is to provide and deliver to the Employer/Employer's Agent are to be as described in clause A1.2.8 'Workmanship and Quality Control' of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 and clause 7 'Quality and Related Matters' of the 'General Conditions of Contract 2015'.
4.12.2	The fabrication drawings that the Contractor is to provide to the Employer are: none.
4.14.5	The Contractor is to provide latrine and ablution facilities as described in Part C 'Environmental Management Plan' in Section C3.3 Particular Specifications of these Project Specifications.
4.14.6	The requirements for the provision and erection of signboards are as described in clause A1.2.3.10 'Notices, Signs and Advertisements' of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020, and as detailed in the 'Example of Contract Signboard Details' in Section C4: Site Information of these Project Specifications.
4.17.1	The requirements for the termination, diversion or maintenance of existing services are described in clause A1.2.7.3 and Chapter 2 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.
4.17.3	Services that are known to exist on the site are described in clause A1.2.7.3 and Chapter 2 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.
4.17.4	The requirements for detection apparatus for locating underground services are: none.

Specification data associated with SANS 1921-1	
Clause No.	Essential data
4.18	The additional health and safety requirements are described in Part D 'OHSA 1993 Health and Safety Specification' in Section C3.3 Particular Specifications of these Project Specifications.

5.1.1.1 Additional clauses:

(a) Site meetings and procedures

Site meetings shall be convened as described in clause A1.2.3.16 'Monthly Site Meetings' of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020. The Contractor shall keep on site a set of minutes of all site meetings, daily records of resources (people and equipment employed), a site memoranda book, a complete set of contract working drawings and a copy of the procurement document, and shall make these available at all reasonable times to all persons concerned with the contract.

(b) Water and electricity

The Contractor is to provide water and electricity as described in clauses A1.2.3.21 'Water' and A1.4.7.3 'Services' of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

5.1.2 SANS 1921-6 Part 6: HIV/AIDS awareness

Specification data associated with SANS 1921-6	
Clause No.	Essential data
4.2.1(a)	A qualified service provider is one that is an accredited or provisionally accredited training service provider in the HIV/AIDS field. A list of accredited service providers can be obtained from the Construction SETA (CETA) (tel. 011 265 5900), Health and Welfare SETA (HWSETA) (011 622 6852) or on the Health and Welfare SETA website: www.hwseta.org.za .
4.2.1(a)	The HIV/AIDS awareness programme is to be repeated at four monthly intervals throughout the duration of the contract.

5.1.2.1 Additional clauses:

(a) Workshops

The duration of each workshop shall not be less than 2½ hours.

5.2 Recording of weather

The Contractor shall erect a rain gauge and record the rainfall as described in clause A1.2.3.4 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020. This information together with other details of the prevailing weather conditions shall be recorded in the daily site diary.

5.3 Unauthorised persons

The Contractor shall keep unauthorised persons away from the Works at all times. Under no circumstances may the Contractor's personnel be accommodated on the site.

5.4 Management meetings

Management meetings are to be held weekly at a time convenient to all concerned, to discuss

planning and health and safety amongst other things. Attendance by the Construction Manager and the Employer's Agent's Representatives on site is mandatory, and attendance by other interested parties will be by invitation.

5.5 Forms for contract administration

The Employer's Agent's Representative will provide standard forms for 'Site Diary', 'Site Memoranda', 'Requests for Inspection' and any others deemed to be necessary during the contract.

5.6 Electronic payments

Payments of approved payment claims will be made electronically upon submission of the Contractor's banking details.

5.7 Daily records

A site diary is to be compiled jointly by the Construction Manager and the Employer's Agent's Representatives on site and is to be agreed and signed by both parties. The original signed copy is to be retained by the Employer's Agent's Representative.

The Contractor is to keep daily records of people and equipment on site in a format to be agreed by the Employer's Agent's Representative and is to provide copies to the Employer's Agent's Representative when requested.

5.8 Payment certificates

Details of measurements, proof of payment for items contained in provisional sums and prime cost sums, proof of ownership of Plant and materials on site and documentation pertaining to contract price adjustment and special materials, are required as substantiation of claims for payment.

5.9 Permits

No security/entrance permits are required by the Contractor's personnel to enter the site.

5.10 Proof of compliance with the law

There are no requirements for the Contractor to verify compliance with any legislation.

5.11 Submission of reports

The contractor shall submit monthly reports in accordance with the specifications in Part E: Expanded Public Works Programme and Part F: Small Contractor Development.

C3.2: PROJECT SPECIFICATIONS

PART B: AMENDMENTS TO THE STANDARD SPECIFICATIONS

PROJECT SPECIFICATIONS RELATING TO THE STANDARD SPECIFICATIONS AND OTHER ADDITIONAL SPECIFICATIONS

In certain clauses in the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020, allowance is made for a choice to be specified in the Project Specifications between alternative materials or methods of construction, and for additional requirements to be specified to suit a particular contract. Details of such alternatives or additional requirements applicable to this Contract are contained in this part of the Project Specifications. It also contains the necessary additional specifications required for this Contract.

The clauses and payment items dealt with in this part of the Project Specifications are numbered 'PS' with a number corresponding to the relevant clause or item number in the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

New clauses and payment items not covered by clauses or items in the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 have been included here and have also been designated with the prefix 'PS'. Such clauses and items have been given a new number following upon the last number used in the particular chapter referred to in the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

CHAPTER 1.2 GENERAL REQUIREMENTS AND PROVISIONS

PART A: SPECIFICATION

PSA1.2.3.4 EXTENSION OF TIME FOR DELAYS BY RAINFALL

Add the following to the end of A1.2.3.4(b) Method 2 (Critical path method with consequential delays):

The value of “n” working days expected delay caused by normal rainy weather as referred to in Method (ii) shall be as given in the table below for each respective calendar month of any year:

Month	Expected delay of "n" working days due to normal rainy weather	Month	Expected delay of "n" working days due to normal rainy weather
January***	5	July	1
February	4	August	1
March	4	September	2
April	3	October	3
May	2	November	4
June	1	December***	5

*** Includes the whole month of December / January.

PSA1.2.3.11 ORDERING OF DAYWORKS

Replace Clause A1.2.3.11 with the following:

PSA1.2.3.11 DAYWORKS

a. Scope

Rates for daywork shall be entered in the under item C1.2.8.1 in accordance with the following specifications.

b. Daywork Rates

According to Clause 6.5 of the General Conditions of Contract 2015, certain work may be carried out using rates tendered in the daywork schedule. A schedule of personnel, construction equipment and vehicles which may be required to perform work on a daywork basis is included in the Bill of Quantities. The quantities used in the Bill of Quantities are for tender evaluation purposes only and the use or not of these items shall not constitute a variation in terms of Clause 6.3 of the General Conditions of Contract 2015.

No work will be paid for as daywork without the written instruction or approval of the Employer's Agent.

c. Type of Work

The Employer's Agent may order daywork in certain cases where it is necessary to vary or to extend the works due to new or unforeseen circumstances to such an extent that the tendered rates for specific items of work are no longer applicable, or where no suitable combination of tendered rates can be used to pay for such work.

As a general rule, applicable rates for additional work items will be agreed between the Contractor and the Employer's Agent. Daywork will only be used in exceptional

circumstances.

d. Materials

Materials for use in works carried out under daywork shall be purchased by the Contractor who shall also arrange for delivery to site, and shall be responsible for any other requirements associated with specific materials. A Provisional Sum has been allowed in C1.2.8 of the Bill of Quantities for daywork materials. The Contractor shall enter a tendered percentage in the Bill of Quantities to cover his handling costs and profit, as per other provisional and prime cost sums in this Contract.

Materials shall be paid for using the method described in C2.1, 'Pricing Assumptions'. No contract price adjustment will be applicable to materials.

The Contractor shall submit proof of ownership for any materials used in daywork with his daywork claim to the Employer's Agent. Further, if specific materials are required for daywork, quotations will be called for as per Clause 6.5.2 of the General Conditions of Contract 2015.

e. Construction Equipment

Where daywork is ordered, the tendered rates for construction equipment in C1.2.8 of the Bill of Quantities shall be used in calculating the payment due for any construction equipment required to execute the daywork. If no rate is included in the Bill of Quantities for a particular item of construction equipment, and where no other rate or combination of rates would provide suitable compensation, then the daywork method of payment described in Clause 6.5.1.3 of the General Conditions of Contract 2015 will be used.

The tendered rates for each item of construction equipment shall include for all operating costs associated with the said item of construction equipment. Such costs are deemed to include fuel, re-fuelling costs, lubrication and routine servicing / maintenance, breakdowns and spares, all overhead costs, site management costs and administration costs. The tendered rates shall also include the construction equipment operator and the general supervision of the construction equipment while it is engaged in the daywork.

f. Salaries and Wages of Workmen

The salaries and wages of workmen executing daywork shall be paid for using the tendered rates in the Bill of Quantities. The tendered rates shall include for all costs associated with the employment of personnel, including salaries, wages, allowances, workmen's compensation, medical aid and pension contributions, government levies and taxes, training costs and any costs associated with living on the site. The tendered rates shall also include for the transportation of the workmen to the site of the daywork.

All overhead costs, administration costs, site management costs and the Contractor's profit are deemed to be covered by the daywork rates and no additions or mark ups will be made to the tendered rates.

The tendered rates shall also include any hand tools normally associated with the workmen's job description e.g. picks, shovels, hammers, saws and spirit levels. The tendered rate for labourers shall also include for the casual supervision by a gang leader or foreman. Only when specifically called for by the Employer's Agent, will payment be made for the use of a gang leader or foreman supervising on a continuous basis.

g. Measurement and Payment

The following principles shall also apply to the measurement and payment of daywork.

The unit of measurement for construction equipment shall be the number of Vibroclock hours worked and each item of construction equipment shall be fitted with a Vibroclock, the cost of which shall be included in the rates. Excessive non-productive time when the engine is idling will not be paid for. Where there is ambiguity between the flywheel horsepower and mass of the machine, the flywheel horsepower shall govern the measurement category. Where width and mass are specified, mass shall govern the measurement category.

The Contractor's attention is drawn to the requirements of Clauses 6.5.3 and 6.5.4 of the General Conditions of Contract 2015 with regard to the submission of lists and statements of personnel, materials and construction equipment used for daywork.

The payment items under C1.2.8 in the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020 will be applicable.

PSA1.2.3.15 Routine maintenance

Add the following to Clause 1.2.3.15:

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 Contractor shall be required to identify all the maintenance activities required timely and shall submit this to the Employer for approval in writing before undertaking 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.

Add the following new payment item.

PSC1.2 MEASUREMENT AND PAYMENT

Item	Description	Unit
PSC1.2.11	Maintenance of the new road during the defect liability period:	
PSC1.2.11.1	(i) Grass cutting Prov sum	
	(ii) Handling costs and profit in respect of item PSC1.2.11.1(i)	%
PSC1.2.11.2	(i) Drain cleaning Prov sum	
	(ii) Handling costs and profit in respect of item PSC1.2.11.2(i)	%
PSC1.2.11.3	(i) Cleaning out culverts Prov sum	
	(ii) Handling costs and profit in respect of item PSC1.2.11.2(i)	%
PSC1.2.11.4	(i) Repair of Guardrails Prov sum	
	(ii) Handling costs and profit in respect of item PSC1.2.11.2(i)	%
PSC1.2.11.5	(i) Replacement of Road Studs Prov sum	
	(ii) Handling costs and profit in respect of item PSC1.2.11.2(i)	%
PSC1.2.11.6	(i) Road Marking Prov sum	
	(ii) Handling costs and profit in respect of item PSC1.2.11.2(i)	%
PSC1.2.11.7	(i) Repair of Road Signs	

Prov sum

(ii) Handling costs and profit in respect of item PSC1.2.11.2(i) %

Payment will only be made under items PSC1.2.11.1 to PSC1.2.11.7 when the relevant item of routine maintenance work has been submitted by the Contractor to the Employer for approval and the Employer has confirmed in writing the scope, quantity and/or frequency of work that is to be carried out.

The provisional sum allowed under item PSC1.2.11.1 shall provide for grass cutting. The contract rate shall include full compensation for tools, transport and labour required for cutting and removing grass in restricted and steep access areas with hand tools in addition to mowing and removing grass in more accessible areas.

The provisional sum allowed under item PSC1.2.11.2 shall provide for drain cleaning. The rate shall be based on the kilometre of side or median drain cleaned. Each drain shall be measured separately. The contract rate shall include full compensation for the removal of all silt, mud, gravel, rocks and any other obstructions in the drain as well as for loading and hauling the removed material to spoil regardless of the haul distance.

The provisional sum allowed under item PSC1.2.11.3 shall provide for cleaning of culverts. The contract rate shall include full compensation for the removal of all silt, mud, gravel, rocks and any other obstructions from inside the culvert or from the culvert entrance and exit as well as for loading and hauling the removed material to spoil regardless of the haul distance.

The provisional sum allowed under item PSC1.2.11.4 shall provide for the repair of guardrails. The contract rate shall include maintenance and repairs to any part of the guardrail including the timber posts, end wings, bullnoses, end treatments, bridge adapters and reflectors. The tendered rates shall include full compensation for furnishing all materials and labour for erecting and galvanizing the guardrails, complete with posts, spacer blocks, bolts, nuts, washers and reinforcing plates, and excavating holes in all classes of material, concrete, backfilling and removing any surplus material. It shall also include full compensation for incidentals in respect of supplying and erecting guardrails, end treatments, and turned down sections. The rate shall also include reflective plates to guardrails and drilling and blasting of holes

The provisional sum allowed under item PSC1.2.11.5 shall provide for the replacement of road studs. The rate shall include full compensation for establishing specialist teams and equipment, and for procuring and furnishing all the necessary material, labour and equipment, and for fixing and maintenance as specified. The road studs to be installed shall match that of the specifications in under payment item C11.7.7.

The provisional sum allowed under item PSC1.2.11.6 shall provide for the reapplication of road marking.

The unit of measurement for applying the roadmarking material for the lettering, symbols, transverse lines, islands and arrestor bed markings shall be the square metre, and the quantity to be paid for shall be the actual surface area of the lettering, symbols, transverse lines, islands and arrestor bed markings, completed in accordance with the specifications and on instructions of the Engineer.

The rate for applying the road marking material shall include full compensation for establishing specialist teams and equipment, and for procuring and furnishing all material, including the retro-reflective beads and all necessary equipment, and for applying, protecting and maintenance as specified, including the setting out of lettering, symbols, transverse lines, islands and arrestor bed markings.

The provisional sum allowed under item PSC1.2.11.7 shall provide for the

reinstatement or replacement of regulatory or warning road signs. The rate for item PSC1.2.11.7 shall include full compensation for procuring and furnishing all the materials, and for manufacturing and supplying the completed road signboard, including amongst others the supporting framework, reinforcement, cross bracing, struts, fixing brackets, angle-irons, channel profiles, galvanizing (if specified), painting, retro-reflective or semi-matt black lettering, symbols, numbers, arrows, emblems and borders, for attaching the road signboard to a road sign support structure and for all materials, equipment, labour, supervision, nuts, bolts, transport, handling, etc necessary for the manufacture, completion, delivery, installation of the road sign board complete as specified, the removal and disposal of all vegetation obstructing the motorists' view of the new or replaced sign board, and shall include payment for road sign supports.

All the provisional sum under items PSC1.2.11.1 TO PSC1.2.11.7 shall be in accordance with the General Conditions of Contract applicable to Provisional Sums.

The Handling Costs and Profits tendered percentage under subitem PSC1.2.11.1 to PSC 1.2.11.7 (ii) is a percentage of the total amount of expenditure approved by the Employer's Agent under the provisional sum subitems PSC1.2.11.1(i) to PSC 1.2.11.7 (i) and shall include full compensation for attendance by the Contractor, for the handling costs of the Contractor, and for the profit in connection with payments made by the Contractor with respect to the provision of each maintenance activity as indicated in the schedule.

PSA1.2.3.18 Stakeholder liaison

Add the following to Clause A1.2.3.18:

a. Project Liaison Committee

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 employer, 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.

A new pay item is included in Chapter 1.2 of the schedule of quantities relating to the payment of the PLC on a provisional sum basis. Payment under this item shall be made only for the period for which the duties of the PLC are required, and not necessarily for the full duration of the contract.

b. Community Liaison Officer (CLO)

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 engineer and the employer.

The CLO shall:

- i. represent the community and assist the contractor, the engineer and the employer 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 labourers 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;
- vii. attend all meetings at which the community and/or local labour are present or are required to be represented;
- viii. attend monthly site meetings to report on community and local labour matters;
- ix. keep a daily written record of interviews and community liaison;
- x. submit monthly returns regarding community liaison; and
- xi. carry out all such other duties as agreed upon between all parties concerned.

A new pay item is included in Chapter 1.2 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.

Add the following new Clause A1.2.3.24:

PSA1.2.3.24 Compliance with the Road Traffic Act

When a service necessitates vehicles or plant travelling or working on a public road, the following shall apply:

- The vehicles and plant shall be licensed in terms of the National Road Traffic Act 1996 (Act No. 93 of 1996) as amended.
- Every driver and operator of a vehicle or an item of plant shall be in possession of a valid permit in respect of the class of vehicle or item of plant he / she is driving or operating.

The Contractor shall provide, erect and maintain sufficient road signs, barricades, fencing and guarding as may be necessary or required by the Employer's Agent or by any act, regulation or

statutory authority in order to minimise the danger and inconvenience caused to vehicle and pedestrian traffic. The Contractor by accepting this contract shall be deemed to have indemnified the Employer and the Employer's Agent against any claims, damages and / or costs that may arise in this regard.

Add the following new payment item.

PSC1.2 MEASUREMENT AND PAYMENT

Item	Unit
PSC1.2.10 Community Participation	
(a) Cost for community Participation (PLC and CLO)	Prime Cost Sum
(b) Handling costs and profit in respect of sub-item PSC1.2.10(a) above percentage (%)	

Expenditure under this item shall be made in accordance with clause 6.6 of the General Conditions of Contract 2015.

The tendered percentage is a percentage of the amount of expenditure approved by the Employer's Agent under sub-item PSC1.2.10(a), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the provision of a Community Liaison Officer."

C1.3 CONTRACTOR'S SITE ESTABLISHMENT AND GENERAL OBLIGATIONS

PART C: MEASUREMENT AND PAYMENT

PSC1.3.1.3 Time-related obligations

Add the following at the end of clause C1.3.1, Under Item C1.3.1.3

"The amount payable to the contractor for time-related general obligations arising from extensions of time granted in accordance with Clause 5.12.1 and Clause 5.12.2 of the GCC 2015, shall be calculated as follows:

- (i) The Contractor shall apply for the extension of time in terms of the number of days delay incurred calculated in accordance with Clause 5.1 of the GCC 2015.
- (ii) The number of days extension of time calculated in accordance with Clause 5.1 of the GCC 2015, finally granted shall then be added to the due completion date of the contract by the Engineer, commencing on the first working day after the day of the original due completion date. Non-working days and special non-working days as defined in the contract data shall not be counted as working days in calculating the extended completion date.
- (iii) The number of calendar days extension of time granted from the original completion date to the extended completion date as calculated in (ii) above shall then be calculated, commencing on the first calendar day after the day of the original completion date.

The following formula shall then be used to calculate the number of months extension of time granted;

$$\text{No. of months extension of time granted} = \left[\frac{\text{No. of calendar days extension of time granted}}{365} \right] \times 12$$

- (iv) The number of months extension of time granted calculated as in (iii) above shall be the number of additional months measured for payment for time-related general obligations under item PSC1.3.1.3 and in accordance with Clause 5.12.3 of the GCC 2015 as a result of the extensions of time granted.

NOTE: The number of months extension of time granted calculated as in (iii) above shall also be included in the measurement of any other items scheduled under Sections C1.3, C1.4 and C1.5 or elsewhere in the schedule of quantities that involve the unit of measurement "month" and that were provided on site for the full duration of the extended period. Where such items were provided for a portion of the extended period only, a pro rata payment shall be made, based on the number of calendar days the item was provided on site after the original completion date divided by the number of calendar days as calculated in (iii) above for the extension of time granted."

CHAPTER 1.5 ACCOMMODATION OF TRAFFIC

PART C: MEASUREMENT AND PAYMENT

PSC1.5 MEASUREMENT AND PAYMENT

Item	Unit
PSC1.5.13 Blading by road grader	
PSC1.5.13.1. Blading by road grader of >6m	
a) Machine Trimming: Normal Blading – 3% - without Watercart	kilometre (km)
b) Machine Trimming: Dry Road Blading using Watercart – 3%	kilometre (km)
PSC1.5.13.2 Blading by road grader of <6m	
a) Machine Trimming: Normal Blading – 3% - without Watercart	kilometre (km)
b) Machine Trimming: Dry Road Blading using Watercart – 3%	kilometre (km)

The tenderer is to assume that it will take 4 passes with a grader to achieve the desired road profile, a further 4 passes with the grader to spread the fines and a further 2 passes to achieve the required finish. The rate for Dry Road Blading shall include the utilisation of a Water sprinkler to thoroughly water the full width of gravel layer by making sufficient passes as required, ahead of the grader. The rate shall include for Travelling to and from the Contractor camp. The measurement will be the km of completed road. The rate shall further include for the removal and cleaning of any spillage of material into existing structures and catch pits.

CHAPTER 8.8 PATCHING AND EDGE BREAK REPAIR

Add the following new payment item.

PSC8.8.7.4. Temporary cold mix plug	
a) Patches less than 1m ²	square meter (m ²)
b) Patches greater than 1m ² but not exceeding 2m ²	square meter (m ²)

The tendered rate shall include full compensation for providing all the material, transport, work in restricted areas, machinery, equipment, labour, supervision, excavating and removing the existing premix surface and loose material to an overall depth of approximately 100mm, scarifying and removal of all loose material and dust by means of sweeping/brushing. Prepare the surface with 0.55l/m² of 60% anionic Bitumen emulsion tack coat to be verified with the engineer and backfilling the area with approved cold mix Asphalt with a maximum aggregate size of 10mm and in accordance with TRH 8, compacted to a density of 97 % Rice – design voids, to 5mm above the existing road surface level. All Potholes are required to be patched within 24 hours from the time that the pothole is reported to the contractor.

CHAPTER 11.3 GUIDE BLOCKS AND KILOMETRE MARKER

PSC11.3 MEASUREMENT AND PAYMENT

Item **Unit**

**PSC11.3.4 Repainting of Kilometre Post
Number (No)**

The unit of measurement shall be the number of Kilometre posts painted.

The tendered rate shall include full compensation for all labour and material and painting, as may be necessary for completing the work in accordance with the details shown on the drawings (SD1003/B).

CHAPTER 15.1 CHEMICAL CONTROL OF UNDESIRABLE VEGETATION

PS PART A: SPECIFICATION

PSA15.1.1 SCOPE

This specification covers the chemical eradication of declared and undesirable vegetation as well as the chemical control of vegetation growth, through the application of herbicide.

PSA15.1.2 EXECUTION OF WORK

The Contractor's attention is drawn to the requirement that, prior to carrying out any spraying with herbicide, he/she, together with 3 assistants, shall be required to attend a 3- to 5-day accredited training workshop.

The registered Contractor shall be at the site of application at all times during spraying and shall ensure that no damage is caused to other plants inside or adjacent to the treated areas as a consequence of the application of herbicides.

Application shall not be carried out in high winds or wet weather.

The Contractor shall assess the number of different types of places where application of chemicals will be required and to make provision accordingly for the fluctuating chemical demand per section of road. The herbicide shall be strictly applied at the rate recommended by the manufacturer.

a. Control of vegetation growth

Subject to approval by the Engineer beforehand, spraying shall be executed in the following designated areas:

- i. Shoulder weed spray shall involve the spraying of a 300 mm wide strip of herbicide, 100mm of which will be on the surfaced shoulder and 200 mm on the gravel shoulder;
- ii. Vegetation under guard-rails shall be controlled by spraying under the guard-rail to a minimum width of 500 mm;
- iii. Openings, cracks and joints between the road pavement and concrete, on joints and cracks of concrete drainage channels as well as between paving stones and concrete blocks, to a minimum width of 100 mm;
- iv. Up to a minimum distance of 300mm around the poles at kilometre markers, road signs and guard-rail posts;
- v. On block paved areas; and
- vi. Between the road and the road reserve fence or neighbouring fence or wall.

b. The eradication of undesirable vegetation

The eradication of declared and undesirable vegetation shall take place in the road reserve over the whole length of the section of road involved and may include localised patches of noxious weeds, invader plants and other undesired vegetation.

The Contractor shall ensure that no damage whatsoever is caused to any plants inside or adjacent to the areas treated because of the application of the herbicides, either during or after application. This also includes areas outside the road reserve.

Below is a list of preferred chemicals to be used in the various applications.

Verge Application	
Product	Active ingredients:

Tumbleweed (L4781)	Glyphosate 240g/L
Invade (L10093)	Imazapyr 250g/L
Outpace Flo (L4760)	Simazine 250g/L + Terbutylazine 250g/L
Booster AS (L6182)	Ammonium Sulphate 500g/L
Noxious weed Control	
Frixon (L8399)	Fluroxypyr 200g/L
Picloram (L8299)	Picloram 240g/L
Viroaxe (L6663)	Triclopyr 480g/L
Ambition (L7678)	Metsulfuron - Methyl 600g/L
Booster Oil (L6148)	Vegetable Oil 851g/L
Cutstump Treatment	
Invade (L10093)	Imazapyr 250g/L
Booster Oil (L6148)	Vegetable Oil 851g/L
Dye (Stump marker)	Pigment dye

Prior to commencement with application of any herbicide, a registration document from the Department of Agriculture must be provided to the Employers Agent for each chemical to be used. The Employers Agent will approve the use of the specific chemical prior to commencement.

PSA15.1.3 ACCEPTANCE CRITERIA

Eradication of undesired vegetation shall be carried out as specified and to the satisfaction of the Engineer. The herbicide shall be applied at the correct rate to prevent re-growth and the application confined to the undesired vegetation.

Areas shall be left neat and tidy and all vegetation cuttings removed unless otherwise instructed.

PSA15.1.4 CONSTRUCTION EQUIPMENT

Vegetation shall be eradicated using knapsacks or portable weed-spray machines.

It is important that the equipment be in good working condition. The equipment shall distribute the herbicide evenly without spilling. The nozzle shall be able to move close to the ground in order to prevent mist spray blowing away and killing plants which gave to be maintained. The equipment shall also be safe for the workers as well as for the travelling public. The Contractor shall ensure that all persons dealing with herbicides are supplied with hats, gloves, boots, goggles, face masks and safety vests and that they always wear them whilst working.

PS PART B: MEASUREMENT AND PAYMENT

Item	Unit
PSC15.1.1: Chemical Control of undesirable vegetation	
a) Shoulder Weed Spray: 300mm wide	meter (m)
b) Under Guardrails: 500mm wide	meter (m)
c) Openings, crack and joints: 100mm wide	meter (m)
d) Around poles, Kilometre markers, road signs, guardrail posts. The area around the	

- signs and kilometre posts are required to be a 2m radius. number (No)
- e) Blocked paved and other paved areas square meter (m²)
- f) Along the Road Reserve
- i. Isolated Areas square meter (m²)
- ii. Dense areas (areas more than 20% infested)hectare (ha)The unit of measurement for sub-items PSC15.1.1(a) to (c) shall be the metre of control of weeds to the specified width.

The unit of measurement for sub-items PSC15.1.1(d) shall be the number of poles, road markers, road signs and guard-rail posts sprayed around.

The unit of measurement for sub-items PSC15.1.1(e) and (f) shall be the square metre of control of vegetation and eradication of weeds.

The unit of measurement for sub-item PSC15.1.1(g) shall be the hectare of control of vegetation and eradication of weeds. The areas will be measured by dense hectare (the percentage of infestation per hectare). For payment, the rate per hectare will be that multiplied by the percentage infestation.

The tendered rates shall include full compensation for all labour, equipment and minor material (herbicide shall be supplied by the Employer) required for control of vegetation and eradication of weeds in accordance with the manufacturer's specifications and inclusive of any costs arising from restricted working conditions due to the nature of the site or traffic flow.

Payment shall be made as follows:

- (a) 60% shall be payable when visible results are obtained
- (b) The remaining 40% shall be payable when at least 90% of the treated vegetation has been controlled in the opinion of the Engineer

C3.3: PARTICULAR SPECIFICATIONS

In addition to the Standard Specifications and the Project Specifications, the following Particular Specifications shall apply to this contract and are bound in hereafter:

PART C: ENVIRONMENTAL MANAGEMENT SPECIFICATION

.....
C133

PART D: OHSA 1993 HEALTH AND SAFETY SPECIFICATION

.....
C170

PART E: EXPANDED PUBLIC WORKS PROGRAMME

.....
C214

PART F: SMALL CONTRACTOR DEVELOPMENT

.....
C249

PART G: CONTRACT SKILLS DEVELOPMENT GOAL

.....
C294

3.3 PARTICULAR SPECIFICATIONS

PART C: ENVIRONMENTAL MANAGEMENT SPECIFICATION

PART C: ENVIRONMENTAL MANAGEMENT SPECIFICATION

C1. SCOPE

The Employer recognises environmental management as a key component of road infrastructure development and as part of its environmental policy has developed this environmental management specification as a tool for continual improvement in environmental performance.

This environmental management specification prescribes the methods by which proper environmental controls are to be implemented by the Contractor. The duration over which the Contractor's controls shall be in place cover the construction period of the project as well as the limited time after contract completion defined by the General Conditions of Contract 2015 as the Defects Notification Period (maintenance period).

C2. ENVIRONMENTAL MANAGEMENT PLAN

In order to ensure that the construction work is carried out in an environmentally sensitive manner, strict compliance with the Environmental Management Plan (EMP) guidelines is required. The purpose of the EMP is to:

- Encourage good management practices through planning and commitment to environmental issues,
- Provide rational and practical environmental guidelines to:
 - (i) Minimise disturbance of the natural environment,
 - (ii) Prevent pollution of land, air and water,
 - (iii) Prevent soil erosion and facilitate re-vegetation.
- Adopt the best practicable means available to prevent or minimise adverse environmental impact,
- Develop waste management practices based on prevention, minimisation, recycling, treatment or disposal of wastes,
- Train employees and contractors with regard to environmental obligations.

C3. ADMINISTRATION OF ENVIRONMENTAL OBLIGATIONS

The Contractor is responsible for the implementation of this EMP to ensure sound environmental management during the construction phase of a project.

The Contractor shall receive and implement any instruction issued by the Employer's Agent relating to compliance with the EMP including the removal of personnel or equipment.

Compliance with the provisions contained herein or any condition imposed by the environmental approvals, shall become the responsibility of the Contractor through an approved Environmental Officer (EO). The Contractor shall nominate a person from among his site personnel to fulfil this function and submit to the Employer's Agent for his approval the curriculum vitae of the proposed EO. This request for approval shall be given, in writing, at least fourteen days before the commencement of any construction activity clearly setting out reasons for the nomination, and with sufficient detail to enable the Employer's Agent to make a decision.

Once a nominated representative of the Contractor has been approved as the EO, the EO shall be the responsible person for ensuring that the provisions of this EMP are complied with for the duration of the contract. The EO shall submit monthly written reports of compliance with the EMP to the Employer's Agent.

In addition to the compliance duties relating to this EMP, the EO shall also provide full cooperation whenever the Contractor is subjected to regular environmental audits.

C4. TRAINING AND INDUCTION OF EMPLOYEES

The Contractor has a responsibility to ensure that all those people involved in the project are aware of and familiar with the environmental requirements for the project (this includes subcontractors and local labour). The EMP shall be part of the terms of reference for all contractors, subcontractors and suppliers.

C5. COMPLAINTS REGISTER AND ENVIRONMENTAL INCIDENT BOOK

Any complaints received by the project team from the public will be recorded. The complaint should be brought to the attention of the Construction Manager, who will respond.

The following information must be recorded:

- Time, date and nature of the complaint,
- Type of communication (telephone, letter or email),
- Name, contact address and telephone number of the complainant,
- Response and investigation undertaken, and
- Actions taken and by whom.

All complaints received will be investigated and a response given to the complainant within 14 days.

All environmental incidents occurring on the site will be recorded. The following information will be provided:

- Time, date, location and nature of the incident, and
- Actions taken and by whom.

C6. SITE CLEANLINESS AND NEATNESS

- Location of a construction camp is to be approved by the Employer's Agent and is to be restored to its previous condition after completion of construction.
- The construction camp should preferably be fenced with a 1,8m Bonnox fence or similar approved.
- All materials, equipment, plant and vehicles must be stored within the construction camp.
- A dedicated area must be made available for construction staff to change and store their personal belongings.

C7. ACCESS

- Access to existing roads, schools, buildings, shops and residential properties must not be impeded during construction.
- Access roads utilised by the Contractor must be maintained in good condition.

C8. BORROW PITS

- Mining authorisations (permits) for borrow pits must be obtained from the Department of Mineral Resources (DMR) in consultation with the Department of Water and Sanitation (DWS).
- Spoil dumps resulting from borrow pits must not interfere with any natural surface drainage.
- Borrow pits must be rehabilitated after use in accordance with the requirements of DMR and DWS.

C9. DUST CONTROL / AIR QUALITY

- Dust suppression measures must be implemented during construction by ensuring

- that all surfaces prone to dust generation are kept damp (e.g. use of water tanker).
- Ensure that vehicles and equipment are in good working condition and that emissions are not excessive.
- Special care must be taken in areas where the route passes close to schools and residential areas.
- The speed of construction vehicles must be reduced.

C10. FAUNA

- Contractors' and subcontractors' staff and workers may not chase, catch or kill animals encountered during construction.

C11. FIRE PREVENTION AND CONTROL

- Smoking is prohibited in the vicinity of flammable substances.
- The Contractor must ensure that fire-fighting equipment is available on site, particularly where flammable substances are being stored or used, and that construction staff are aware of where it is kept and how it is operated.
- Fires started for comfort (warmth) are prohibited, due to the risk of veld fires and risk to adjacent property owners' lands.

C12. GRAVE SITES

- Grave sites in close proximity to the road must not be disturbed during construction.

C13. MATERIALS HANDLING AND SPILLS MANAGEMENT

- Any hazardous materials to be used during construction (e.g. lime, fuel and paint) are to be stored in a designated area at the campsite.
- The storage containers/facilities (including any diesel or petrol tanks) must be placed on an impermeable surface and surrounded by a bund wall, in order to ensure that accidental spillage does not pollute the environment.
- Workers must at all times be made aware of the health and safety risks associated with any hazardous substances used (e.g. smoking near fuel tanks), and must be provided with appropriate protective clothing/equipment in case of spillages or accidents.
- Ensure all staff and contractors undergo relevant training in the maintenance of equipment to prevent the accidental discharge or spill of fuel, oil, lubricants and other chemicals.
- Any spill of potentially hazardous materials must be cleaned up immediately (potentially hazardous materials on site include paint, oil, grease, fuel and turpentine).
- The area of contaminated soil or spill must be deposited into the hazardous waste container(s).
- The Contractor should keep Peat Sorb or a similar absorbent on site to clean up any spills. The absorbent must be stored in a designated area and be available for inspection.
- All spills are to be recorded in the environmental incident book.

C14. NOISE

- Noise generating activities must be restricted to between 07:00 and 17:00 Monday to Friday, unless otherwise approved by the appropriate competent person in consultation with adjacent landowners/affected persons.
- All equipment, vehicles and machinery must be in good working condition and be equipped with sound mufflers if necessary.
- Construction staff must be trained and made aware of not creating unnecessary

noise such as hooting and shouting.

C15. POLLUTION CONTROL

- Soil and water pollution through usage of fuel, oil, paint, bitumen or other hazardous substances must be avoided.
- All construction vehicles are to be maintained in good working order so as to prevent soil or water pollution from oil, fuel or other leaks, and to reduce noise pollution.

C16. RIVERS AND STREAMS

- During construction of bridge structures, there must be no obstruction of the water flow of rivers and streams.
- Excavated material must not be stockpiled on or near riverbanks, in order to prevent sedimentation occurring.
- Erosion control measures must be employed both during and after construction.
- No impediments to natural surface water flow, other than approved erosion control measures, must occur.

C17. SAFETY

- Safety measures, such as detour signs, must be implemented during construction to ensure the safety of workers, pedestrians and drivers/passengers in vehicles in the vicinity of construction work.
- Special care must be taken in the vicinity of schools to ensure the safety of children wishing to cross the road under construction.
- The relevant signage (e.g. speed control signs) must be erected alongside the road during the operation phase in order to control traffic.
- Accommodation must be made for pedestrian pathways alongside the road during the construction and operation phases.

C18. SOIL MANAGEMENT

- Storm water drainage pipes must be installed alongside the road in all areas susceptible to soil erosion.
- Erosion should be minimised by the construction of meadow drains and the planting of indigenous vegetation on the side slopes and drains to reduce flow velocity of storm water.
- Spoil from cuts may be used in existing erosion gullies.
- Stone pitching and gabions should be constructed at pipe culvert outlets.
- Accidental spills of contaminants onto the ground e.g. oil, concrete, fuel and chemicals should be removed together with the contaminated soil.
- If necessary, an absorbent such as Peat Sorb should be used to aid in cleaning up the spill. The contaminated soil should be disposed of in an appropriate container, depending on its classification.
- Servicing and refuelling of vehicles must only be carried out at the construction camp.

C19. WORKER CONDUCT

Code of Conduct for Construction Personnel:

- Do not leave the construction site untidy and strewn with rubbish which will attract animal pests.
- Do not set fires.
- Do not cause any unnecessary, disturbing noise at the construction camp/site or at any designated worker collection/drop off points.
- Do not drive a construction-related vehicle under the influence of alcohol.
- Do not exceed the national speed limits on public roads or exceed the

- recommended speed limits on the site.
- Do not drive a vehicle which is generating excessive noise or gaseous pollution (noisy vehicles must be reported and repaired as soon as possible).
- Do not litter along the roadsides, including both the public and private roads.
- Do not pollute any water bodies (whether flowing or not).
- No member of the construction team is allowed to enter the areas outside the construction site.

C20. TRAFFIC DISTURBANCES AND DIVERSIONS

- Any traffic diversions must be undertaken with the approval of all relevant authorities and in accordance with all relevant legislation.
- Wherever possible, traffic diversion must only take place on existing disturbed areas and remain within the existing road reserve.
- Traffic diversion routes must be rehabilitated after use.

C21. VEGETATION

- Only vegetation falling directly on the route must be removed where necessary.
- Alien vegetation within the road reserve must be eradicated, and management measures must be implemented for future control of these species.
- Vegetation that has been removed from large areas (e.g. on traffic diversion routes) during construction must be replaced with indigenous vegetation after construction has been completed.

C22. WASTE MANAGEMENT

- All general, non-hazardous waste must be placed in a skip container and disposed of at a registered waste disposal site.
- The Contractor is to ensure that the portable toilet facilities at the campsite are properly maintained and in working order.
- No disposal, or leakage, of sewage must occur on or near the site.
- All hazardous waste (e.g. oil, paint, empty lime bags, and contaminated wash water) must be stored in leakproof containers and disposed of at a registered hazardous waste disposal site.
- The contents of waste storage containers must, under no circumstances, be emptied to the surrounding area. In general, littering, discarding or burying of any materials is not allowed on site or along the route.
- Adequate waste receptacles must be available at strategic points around the construction camp and site for all domestic refuse and to minimise the occurrence of littering.
- Concrete rubble must be collected and disposed of as directed by the Employer's Agent.
- Each working area must be cleared of litter and building waste (e.g. rubble, wood and concrete packets) on completion of the day's work.
- Any spill around the container(s) should be treated as per clause C13 and C18.

C23. MEASUREMENT AND PAYMENT

The contractor shall make provision in the various rates and prices for all costs related to the environmental management specification and measures required in terms of legislation. Provision is made in item B13.02 of the Bill of Quantities for the contractor's general obligations, risks and liabilities in accordance with the environmental management specification.

C3.3 PARTICULAR SPECIFICATIONS

PART D: OHS 1993 HEALTH AND SAFETY SPECIFICATION

PART D: OHSA 1993 HEALTH AND SAFETY SPECIFICATION

D1. SCOPE

This part covers the health and safety requirements to be met by the Contractor to ensure a continued safe and healthy working environment for all employees, subcontractors, the Employer, the Employer's Agent, inspectors and all other persons entering the site of works.

This specification shall be read in conjunction with the Occupational Health and Safety Act, 1993 (Act No 85 of 1993 and amendment Act No 181 of 1993) and the corresponding Construction Regulations 2014, and all other safety codes and specifications referred to in the said Act and Construction Regulations.

In terms of the OHSA Agreement in Section C1.4 of the Contract document, the status of the Contractor as mandatory to the Employer (client) is that of an employer in his own right, responsible for compliance with all provisions of OHSA 1993 and the Construction Regulations 2014.

This specification and the Contractor's own Health and Safety Plan as well as the Construction Regulations 2014, shall be displayed on site or made available for inspection by inspectors, the Employer, the Employer's Agent, the Construction Health and Safety Agent, subcontractors, employees, representatives of trade unions and any other persons entering the site of works.

D2. DEFINITIONS

For the purpose of this contract the following shall apply:

D2.1 "**Construction Health and Safety Agent**" (CHSA) means any competent person who acts as a representative for the Employer in managing health and safety on a construction project for the Employer and who has satisfied the registration criteria of the SACPCMP to perform the required functions.

D2.2 "**Contractor**" where used in the contract documents and in this specification, means the Contractor as defined in the General Conditions of Contract 2015, and it shall have the exact same meaning as "**principal contractor**" as defined in the Construction Regulations 2014. "**Contractor**" and "**principal contractor**" are therefore interchangeable and shall be read in the context of the relevant document.

In this specification the terms "**principal contractor**" and "**contractor**" are replaced with "**Contractor**" and "**subcontractor**" respectively.

For the purpose of this contract the Contractor will, in terms of OHSA 1993, be the mandatory, without derogating from his status as an employer in his own right.

D2.3 "**Employer**" where used in the contract documents and in this specification, means the Employer as defined in the General Conditions of Contract 2015 and it shall have the exact same meaning as "**client**" as defined in the Construction Regulations 2014. "**Employer**" and "**client**" are therefore interchangeable and shall be read in the context of the relevant document.

D2.4 "**Employer's Agent**" where used in this specification, means the Employer's Agent as defined in the General Conditions of Contract 2015.

D3. EMPLOYER'S BASELINE RISK ASSESSMENT

D3.1 Risk information

The information presented in this clause is based on the Employer's baseline risk assessment prepared specifically for this contract.

This information describes the type of work required in terms of this contract that will be accompanied by dangers, hazards and risks which the Contractor shall be required to identify, analyse, manage, monitor and review in terms of the Health and Safety Plan and risk assessments.

This information is neither prescriptive nor exhaustive, and is provided as a guideline to Tenderers in preparing their tender submissions, and to the successful Contractor as a basis for the preparation of the site-specific risk assessments to be performed by the Contractor in terms of Construction Regulation 9.

Tenderers shall make their own assessment of the dangers, hazards and risks that can be expected during the course of this contract, which may include dangers, hazards and risks not identified in the baseline risk assessment, including those that may arise from specific methods of construction employed by the Contractor, and shall make due allowance in their tendered rates and prices for all costs related to complying with the provisions of the Act and Construction Regulations.

This information is given in good faith for the guidance of Tenderers, and no additional payment shall be made as a result of any inaccuracies, discrepancies or omissions contained therein.

D3.2 Baseline risk assessment

The following is a list of risks identified which forms the Baseline Risk Assessment for the project prepared by the Employer in terms of Construction Regulation 5(1)(a).

Table 1: Risk Rating Matrix

<u>Consequence</u> (C)	<u>Probability</u> (P)				
	1	2	3	4	5
4	M	H	H	H	H
3	M	M	M	H	H
2	L	M	M	M	E
1	L	L	M	M	M

Table 2: Risk Rating (R) Definitions

PROBABILITY CATEGORY	DEFINITION
5	Possibly repeated incidents
4	Isolated incidents known to have occurred
3	Possibility of occurring sometime
2	Unlikely to occur
1	Practically impossible
CONSEQUENCY CATEGORY	DEFINITION
4	Serous long- or short-term safety and health effects that may be fatal
3	Serious adverse safety and health effects that would require offsite medical attention
2	Non-life-threatening safety and health effects that may require on site first aid treatment
1	Little if any adverse safety and health effects

3. CONTRACT BASELINE RISK ASSESSMENT

SITE ESTABLISHMENT

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Establishment of the site	Existing services in the areas of establishment Insufficient space for safe and adequate allocation of offices, staff facilities, parking, workshops and traffic movement Unsafe ground conditions i.e., sloping ground	Damage/ disruption to existing services Property damage Injuries Fatalities	5	4	H	Existing services to be located in areas identified for establishment and be addressed according to Engineers Specifications. Adequate space to be allocated for site establishment in consideration to facilities to be provided. Access roads, office areas, employees' facilities, parking areas and stacking areas to be properly designated. Ground surfaces to be stable with safe gradient and free from slipping, tripping and falling hazards.
Access control	Unauthorised access to sites	Loss of property Disruptions on site Injuries to unauthorised personnel Injuries to site personnel	3	3	M	Site to be fenced with bonox fence of 1.6 to 1.8 Lockable gates to be provided to control access. The site entrance to be provided with a warm body security who shall also record site entrance and exit activities.

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Placing of signs and notices	Insufficient information and warning on site requirements	Disruptions Injury to employees Injury to public Damage to property	5	4	H	<p>Construction safety warning signs to be placed at the entrance of the site camp entrance and should contain the following information minimum:</p> <ul style="list-style-type: none"> • Construction activities ahead • No unauthorised entry • Speed limit 20 km / h • Personal protective equipment signs which include "safety boots, reflective vests & helmets signs" • Visitors to report t site office <p>Notice board indicating manhour times worked and incidents / accidents statistics to displayed at the site entrance.</p> <p>First aid kits, name of first aiders and fire extinguishers signs to be displayed where they are located. Assembly point sign and all other required warning signs as per hazards on site to be erected appropriately /where the hazard exists.</p> <p>Signs indicating offices, safe drinking water, ablution facilities and eating areas to be displayed.</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Delivery of containers	<p>Soft, sloping grounds</p> <p>Non – complying delivery vehicles and machines</p> <p>Hitting overhead cables</p> <p>Employees walking under container once it is in the air</p> <p>Unsafe practices</p>	<p>Property damage</p> <p>Injuries</p> <p>Fatalities</p>	5	4	H	<p>Ground where containers are to be placed to be stable to bear the intended weight</p> <p>Overhead cables to be identified and offloading to be not done under them.</p> <p>Lifting machines to comply with the mass loads designed to carry.</p> <p>Ropes and chains for the lifting machine to have a safety factor with respect to load they designed to lift.</p> <p>Lifting machines operators to have competency certificates from an Organisation approved by the Chief Inspector.</p> <p>Inspections to ensure all plant and equipment in the operation are safe for use and records to be kept on the file.</p> <p>Supervisor to ensure that the task is done in a safe manner. Banksman to be provided.</p> <p>Area to be demarcated, unauthorised personnel to be not allowed.</p> <p>Full PPE by personnel involved in the task; reflector vests, overalls, boots, hard hats and gloves.</p> <p>Safe working procedures to be provided</p>
Temporal electrical installation	<p>Uncertified installer</p> <p>Loose wires exposed</p> <p>Caples running over the ground</p>	<p>Electrocution</p> <p>Fire</p> <p>Property damage</p> <p>Tripping and falling</p>	3	4	H	<p>All electrical installations to a conducted an electrician registered with Department of Labour.</p> <p>All cables to run safely underground Certificate of Compliance to be provided for all installations.</p> <p>Temporal electrical installations to be inspected weekly by a competent person</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Bulk fuel storage	Leaks on the tanks Fire Explosions	Injuries and fatalities Damage to property Production downtime	5	4	H	<p>Diesel tanks to be a distance of 10 metres away or more from any building and parking area.</p> <p>A slab with bund wall capable of carrying 110% of the tank capacity must be constructed for the tanks to stand in.</p> <p>Local Fire Inspector to approve bulk storage of diesel.</p> <p>Persons in charge of tanks should be inducted regarding all the hazards involved and how to control them.</p> <p>Fire extinguishers to be readily available near diesel tank storage area as per Local Fire Inspector recommendations.</p> <p>Signage to be displayed in the bulk diesel storage area; fire extinguisher signs, no naked or smoking in the vicinity sign.</p> <p>Diesel pouring safe procedure to be displayed.</p>
Provision of welfare facilities	Not of having essential services for health and wellbeing	Disease & infection Fatigue and dehydration Low moral Poor productivity	3	4	H	<p>Employees to have access to safe drinking water in all workstations.</p> <p>Changerooms with shower facilities must be provided on site</p> <p>Ablution facilities to be provided in all workstations as per legislation requirements and chemical ablutions to be serviced weekly.</p> <p>Ablutions to have toilet paper and be maintained in a hygienic manner.</p> <p>Sheltered eating areas with seats to be adequately provided for employees on site.</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Emergency preparedness	Inability to attend to emergencies on site Remote site	Injuries Fatalities Property damage Emergency services taking long to reach site	5	4	H	<p>Detailed emergency plan to be provided as per emergency situations that can be encountered which included:</p> <ul style="list-style-type: none"> • Fire • Community unrests • Flash floods • Drowning • Structure collapse • Animal's encounter (snakes [research to be done of common snakes found in the area], bees and scorpions) <p>The following emergency equipment to be provided:</p> <ul style="list-style-type: none"> • Warning alarms • First aid kits to be provided • Fire extinguisher to be provided (dry chemical powder 9 kg) • Spill kits to be provided <p>Competent team which includes emergency coordinator, first aiders and fire fighters to be appointed. Emergency drills to be conducted every six months.</p> <p>Site camp to have fire breaks along parameters, width to be 2.5 m width or more.</p>
Stacking, storage and laydown of material	Inadequate space for storage various materials. Poor / unsafe storage of material Poor housekeeping	Accidents Damage to property	3	3	M	<p>Allow sufficient space for lay down and storage of material and waste during planning stage of site layout. All material to be stacked within the barricaded sites boundaries.</p> <p>Stacking, storage and laydown areas to have easy and safe access and be demarcated.</p> <p>Material that can roll down to be properly secured.</p> <p>Stacks to be not three times higher than the base.</p> <p>Hazardous chemical substances to be stored as per material safety data sheets.</p> <p>Good housekeeping to be maintained in the stacking areas</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Adverse weather conditions during works	<p>Extreme heat</p> <p>Slippery conditions during rain</p> <p>Thundering</p> <p>Extreme cold</p>	<p>Dehydration, fatigue, heat exhaust and heat stroke during extreme heat conditions</p> <p>Car accidents due slippery conditions and personnel slips and falls during rainy weather</p> <p>Personnel being struck by lightning</p> <p>Inability to properly grip hand tools due to cold weather thus injuries</p>	5	4	H	<p>Heat evaluation must be conducted on site.</p> <p>The following heat control measures must always be in place for works in hot environments:</p> <ul style="list-style-type: none"> • Have certificates of medical fitness certifying them to work in that environment • Must be acclimatised for working in such environments • Must take 600 millilitres of water per hour <p>First aid measures must be readily available for heat exhaust and heat stroke</p> <p>Works to be stopped during rainy and slippery days on the roads and site camp</p> <p>Works to stop during thundering and lightning conditions and employees to take shelter away from poles and trees.</p> <p>Employees to wear warm cloths and gloves during extreme cold days.</p>

TRANSPORTATION OF EMPLOYEES

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Transportation of site employees	<p>Non – compliant vehicles transporting employees</p> <p>Vehicle overturning or running out of control with employees</p> <p>Employees falling from vehicles</p>	<p>Injuries</p> <p>Fatalities</p> <p>Property damage</p>	4	4	H	<p>Vehicles transporting employees to be road worthy and compliant Construction Regulation’s requirements.</p> <p>All employees to be seated during transportation and have seat belts on.</p> <p>Vehicle to obey road rules during transportation of employees.</p> <p>The PC shall not allow employees to be transported in a goods vehicle unless the portion of the vehicle in which the employees are being conveyed is enclosed to a height of: –</p> <ul style="list-style-type: none"> • at least 350 mm above the surface on which employees are seated; or • at least 900 mm above the surface on which employees are standing, in a manner and with a material of sufficient strength to prevent employees from falling from such vehicle when it is in motion.

SITE CLEARANCE

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Clearing and grubbing	<p>Faulty vehicle and plant</p> <p>Employees working in the vicinity of plant</p> <p>Faulty equipment and hand tools</p> <p>Animals encounter (bees, snakes and scorpions encounter)</p> <p>Noise</p> <p>Dust</p>	<p>Property damage</p> <p>Injuries</p> <p>Fatalities</p> <p>Hearing loss</p> <p>Nose and throat irritation, allergic reactions, silicosis</p>	4	4	H	<p>Method statement for site clearance to be provided.</p> <p>Construction plant and vehicle to adhere to legislation requirements.</p> <p>Competent and authorised personnel to operate equipment.</p> <p>Safe and SABS approved equipment and tools to be used for the tasks, inspection records to be in place.</p> <p>Employees working in clearing and grubbing activities to wear PPE:</p> <ul style="list-style-type: none"> - Long sleeves overalls - Ankle covering safety boots and leg protectors / steel toed gum boots - Long sleeves leather gloves - Helmets/ sun hats - Reflective vests <p>Employees working near plan to be visible to operators and be vigilant,</p> <p>Emergency procedures for animals encounter to be developed. Common snakes in the area to be identified.</p>
Waste Management	<p>Excessive accumulation of waste</p> <p>Improper storage of waste</p> <p>Unapproved means of final disposal</p>	<p>Harbouring of animals i.e., snakes</p> <p>Fire</p> <p>Tripping, falling & injuries</p>	3	3	M	<p>Cradle to grave waste management method statement to be provided</p> <p>Waste must be continuously removed from workstations and be placed in dedicated areas as per EMPr</p> <p>Fire prevention plan must be developed</p> <p>Fire extinguishers must be readily available in case of fire</p> <p>Internal fire breaks must be implemented around stacking areas</p>

CONSTRUCTION VEHICLE OPERATION

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Construction vehicle selection	Vehicle without capacity to operate safely under site conditions	Accidents Injuries Fatalities	5	4	H	Construction vehicle selected for site operations must be able to be operated without any safety risks. An assessment must be conducted on site terrain and intended use; information obtained must be used to ensure plant selected shall operate safely
Parking of construction vehicles	Vehicle parking in non-designated areas Vehicles running off during parking Oil leaks on parked plant	Vehicles crashing Property damage Accidents with may result in injuries	3	3	M	Sufficient space to be provided for parking of construction vehicle and plant at site camp. All vehicles and plant to park in designated areas. Construction vehicles and plant to have wheel stoppers. Drip trays to be placed under parked plant.
Construction vehicle operations near power lines	Clearance not determined Plant hitting powerlines	Property damage Electrocution ; injuries & fatalities Fire	5	4	H	Clearance of all powerlines from the ground to be determined. Warning / controls such as goal posts and signage to be installed on both sides of the powerline for only plant that can pass through safely to be allowed. Tipping under power lines to be prohibited.

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
General operation of construction vehicle and mobile plant on site	<p>Construction vehicle and plant driven by incompetent / unauthorised operators</p> <p>Faulty plant or vehicle</p> <p>Construction vehicles trucking or running over personnel</p> <p>Plat/ vehicle crushing other vehicles</p> <p>Construction vehicles or plant colliding with each other or public vehicles</p> <p>Vehicles overturning</p> <p>Vehicle running out of control</p> <p>Noise</p> <p>Dust</p>	<p>Accidents</p> <p>Property damage</p> <p>Injuries</p> <p>Fatalities</p> <p>Health effects; nuisance, allergic reactions, threshold shift, permanent hearing loss</p>	5	4	H	<p>Construction vehicle to be operated by competent operators. Only Authorised personnel to operate construction vehicle or plant</p> <p>Maximum speed to be as per traffic management plan</p> <p>Daily safety checks should be conducted on the plant, non-conformances to be immediately rectified</p> <p>Road and safety rules and signs to be obeyed during vehicle operations</p> <p>Parking in blind spots of plant / articulated dump trucks to be avoided</p> <p>Drugs testing to be conducted on operators and all personnel on site</p> <p>Construction vehicle operators to wear full PPE, which is overalls, reflective vests & safety boots</p> <p>Plant to be maintained to ensure emitting noise is within safety standards</p> <p>Water spraying to be continuously implemented to control dust created by construction vehicles and plant</p>

ROADWORKS

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Working near traffic	Road accidents	Traffic hitting site employees Traffic colliding with site vehicle Traffic hitting the public Traffic accidents due to distractions from site activities Fatalities	5	4	H	<p>Traffic Management plan for the site to be developed for the works.</p> <p>Speed on the road under construction to be reduced to 40 km/h and warning signs to be posted as per Department of Transport Traffic Signs Manual, 2010</p> <p>Concise signage skim to be in place</p> <p>Safe pedestrian routes to be developed and maintained</p> <p>Controls which include liaisons, signs, flag person, stop and go systems barricaded to be implemented as per risks on site</p> <p>Employees to be trained.</p> <p>All employees to wear reflective vests.</p> <p>Contractor to ensure plans are in place for maintaining safe traffic flow for day and night. This must be addressed in the plan.</p>
Traffic management	Construction vehicle and plants collisions Construction plant crushing light duty vehicles Construction vehicle or plant crushing employees Public vehicles accidents	Property damage Injuries Fatalities	5	4	H	<p>Traffic management plan to be developed as per risks of the workstation.</p> <p>Traffic safety warning signs and speed control signs to be adequately displayed prior work stations on both entrances of the construction site.</p> <p>Signs showing construction activities ahead, speed reduction to 60 km/h, plant presence and speed reduction to up to 40 km/h. These signs must be 50 – 100 meters apart and from the work station. Signs must be installed in poles.</p> <p>Road under construction to maintain speed limit of 40 km/h until handover/ completion of the works.</p> <p>At work stations, traffic must be warned prior through installation of a flagman that must be 150 meters from workstation on both sides of the road.</p> <p>Working areas require speed reduction to 20km/ h 100 meters to ensure safety of workers.</p> <p>Working areas / work stations to be demarcated with delineators that are at least 5 meters apart.</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Half width roads / closed roads operations	<p>Inadequate warning, instructive and informative signage on controlling and managing traffic for the activity</p> <p>Lack of provision of adequate traffic management</p>	<p>Traffic colliding with work stations</p> <p>Traffic hitting workers</p> <p>Traffic colliding with construction vehicles</p> <p>Road accidents, head on collisions of road users</p> <p>Property damage, injuries and fatalities</p>	5	4	H	<p>Contractor to ensure adequate traffic management for the activity.</p> <p>Where road is closed, safe detours to be provided and maintained in good condition and to have adequate signage.</p> <p>Where lane is closed / operations result in half width, contractor to provide stop and go. Stop and go to have signage indicating activity ahead, directional arrows to be provided for intended traffic flow. Personnel operating stop and go sign and controlling of barriers for stop and go to be different.</p>
Employees movement around construction sites	<p>Employees struck by passing traffic and vehicles accessing or exiting to/from works site</p>	<p>Injuries</p> <p>fatalities</p>	5	4	H	<p>All personnel on the road to wear safety boots and reflective vests/ jackets</p> <p>Employees to be always alert of construction vehicle and plant</p> <p>Construction vehicle and plant to be driven at speed stipulated for the site (40 km/ h or 20km / hour where there is activities)</p> <p>Construction vehicle to have functional audio and light warnings</p>
Milling	<p>Non-compliant vehicle</p> <p>Dust exposure (silica)</p> <p>Vehicle's accidents</p>	<p>Property damage</p> <p>Injuries</p> <p>Infections of the lungs</p>	5	4	H	<p>Machine to be compliance as per manufactures instructions</p> <p>Plant to be operated by competent person</p> <p>Traffic management plan to be in place</p> <p>All personnel in the vicinity of the activity to wear dust masks</p> <p>Good housekeeping and waste management to be maintained as per EMPr</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Hauling of cut material	Overloading material on trucks Speeding Poor visibility	Material falling along routes Accidents, injuries, property damage and fatalities	5	4	H	Traffic management to be provided and implemented, Construction traffic flow to be controlled as per site conditions Trucks to be not overloaded with material, controls to be in place. Housekeeping to be maintained, material fallen along the route to be continuously removed.
Stockpiling of material	Unauthorised entrance to stockpile area Poor storage of material, high stacks	Stacks collapse Accidents, injuries and fatalities	3	3	M	Material stockpile area to be fenced. Stacks to be kept at less than 2 meters high. Housekeeping to be kept in the area.
Layer works	Exposure to cement dust Exposure to hot asphalt Exposure to hazardous chemical substance through inhalation or contact Fire explosions	Burns Eye, throat and nose irritation Respiratory infections Fire Property damage	5	4	H	Employees working with cement to wear dust masks Asphalt to be contained in a manner that will prevent employees from being exposed to heat Employees to avoid close contact such as eye exposure, skin contact and inhalation with asphalt Sources of ignition to be kept away from asphalt Material safety data sheet for asphalt to be provided and employees to be trained on it Asphalt that requires disposal to be only disposed in an approved landfill site
Use of Nuclear Density Soil Gauge	Radiation exposure	Skin burns Cancer / cardiovascular diseases	5	4	H	Competent laboratory to conduct density tests. Before operating a nuclear gauge, a person must pass a Nuclear Safety course and be issued a thermoluminescent dosimeter (TLD) badge . The badge measures exposure to radiation and is to be worn whenever operating a nuclear gauge. Exposure to radiation must be limited through time, distance, and shielding. Safe storage and use of equipment to be in place Safe working procedures to be developed and implemented

USING OF HAND TOOLS AND EQUIPMENT

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Operating hand tools	Tools in poor condition Substandard work and possible damage to plant and equipment.	Hand, foot, back injury. Substandard work and possible damage to plant and equipment.	4	3	H	Set standards of tools to be bought by buying department: only SABS approved tools to be used on site.
Operating pneumatic powered tools	Incompetent operator Unsafe tools Improperly functioning tool Oil leaks Noise Vibration Dust Flying objects Ergonomics	Whipping hose Over speeding tool Under operating tool Injuries Noise induced hearing loss Blanching of fingers, loss of sensation and loss of grip strength Eye injuries Back injuries	5	4	H	A trained and competent operator must operate pneumatic tools as per manufacturer's instructions. Tools must be inspected for safety before use, ensure air hose are properly fasted and correct pressure is used The tool must be properly serviced before use. Employees to wear full PPE during machine operation: safety boots, vibration inducing gloves, ear muff, dust masks and goggles. Training on PPE use by all in the vicinity of the hazard. Ensure proper spacing of employees Operators to properly grip the tools when in used. Employees to ensure their backs are straight during works. Employees to take 15 minutes breaks every hour during operation.
Fuel powered tools / electrically powered tools	Incompetent operator Improper refuelling procedures Noise Vibration Dust Oil Leaks	Hands, arms vibration disorder Noise induced hearing loss Nose throat and lung irritation, allergic reactions Body and feet injuries Environmental contamination	5	4	H	Employees to work in pair to take breaks and relieve another from body vibration. Employees operating hand-held compactor to wear full PPE – vibration reducing gloves, ear muff, dust masks and safety boots. Machines to be well maintained and kept in safe working condition. No fuel / oil leaks on the machine. When the equipment has leaks, it should not be used and be fixed to prevent leaking Leaks must be cleaned from the environment, waste to be temporary placed in hazardous chemical subcases bin that must be emptied of in an approved landfill site.

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Working in the vicinity of tools operations	Danger of exposure to hazards Noise Dust Flying objects	Body injuries Noise induced hearing loss Check infections and allergic Reactions Eye injuries	3	3	M	Employees to work too close to others Employees to take reasonable care of others at work. PPE to be used by employees exposed to hazards (ear protection and dust masks)

EXCAVATIONS

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Opening of excavations by plant	Encountering underground services Cave-ins Plant / employees falling into excavations Employees working in close proximity to plant Communities and animals falling into excavations Dust	Damaging underground services/ incidents due to encounter Plant striking employees Property damage Injuries and fatalities	5	4	H	Underground services to be detected before excavations are conducted. Soil composition must be identified and control systems to be designed as per condition. Excavation's dipper than 1.5 meters / with unstable material to be battered at an angle of repose. Or be provided with bracing or shoring. Construction vehicle and plant to keep a safe distance of 1 meter from the edges or as per Engineer's recommendations to prevent causing pressure on walls which may lead to collapse. Employees to keep a safe distance from plant, and be extra vigilant during opening of excavations. All personnel working in the area to wear reflector vests and masks where dust is produced. All excavations to be barricaded with a strong physical barrier to restrain person / animals from fall in. All personnel to wear PPE i.e., reflective vests and dust masks.

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Opening of excavations by hand tools	Striking underground services Unsafe hand tools Employees striking another by tools Hands injuries from using tools Accessing inside excavations Dust	Injuries Fatalities Nose, throats and lung irritations, allergic reactions and infections	5	4	H	Underground services to be detected before excavations and be addressed as per Engineer's specification. Tools used for excavating to be SABS Approved and be inspected for safety before use, employees to be trained on inspecting tools Employees to keep a safe distance from each other when working in the same excavation, a minimum of 10 meters apart. Employees to wear PPE i.e., steel toed safety boots, leather gloves, dust masks and reflective vests Excavations more than 1.5 meters deep to be accessed using safe ladder
Opening excavations using jackhammer	Noise Whole body vibrations Being struck by equipment Ergonomics	Noise induced hearing loss Hand arm vibration syndrome Crush injuries and disabilities Strains, sprains & back injuries	5	4	H	Trained and competent personnel to operate jackhammer equipment Manufacture's operating instructions to be strictly adhered to. Equipment to be inspected before use and manufacture's maintenance program to be adhered to. Employees in the activity or and close proximity to wear PPE i.e., dust masks, reflective vests, steel toed safety boots and ear plucks / ear muffs. Operators to wear anti vibration gloves. Steering wheels to be adjusted to meet height of operators, back to be maintained straight during operation, equipment to be kept close proximity to the body. Employees to be allowed regular breaks / take turns during operation to void exhaustion.
Maintaining open excavations	Employees, personnel or communities falling into excavations Waterlogged excavations Cave-ins Accessing inside excavations	Injuries Fatalities Property damage	5	4	H	Signage showing open excavations to be posted in the vicinity for warn personnel Open, unattended excavations to be barricaded with a strong physical that is clearly visible and more than 1.1 meters high. Excavations to be inspected daily, remedial actions to be taken for excavations with risks. Water logged excavations to be pumped out mechanically without details. Excavations with unstable or collapsing to be addressed as per Engineer's recommendations with bracing or shoring or battering All excavations dipper than 1.5 meters to be accessed using a compliant ladder.

BACKFILLING

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Backfilling of excavations by plant	<p>Cave-ins</p> <p>Burying personnel or equipment</p> <p>Plant / employees falling into excavations</p> <p>Employees working in close proximity to plant</p> <p>Dust</p>	<p>Plant and personnel falling into excavations</p> <p>Property damage</p> <p>Injuries and fatalities</p> <p>Nose, throats and lung irritations, allergic reactions and infections</p>	3	4	M	<p>Inspections to be conducted on excavations before burring.</p> <p>Personnel to keep away from excavations being backfilled.</p> <p>Plant to keep a safe distance from the edges as per Engineer's recommendations to prevent causing pressure on walls which may lead to collapse.</p> <p>All personnel working in the area to wear reflector vests.</p> <p>All personnel to wear PPE i.e., reflective vests and dust masks.</p> <p>Task to be conducted under supervision.</p>
Backfilling of excavations manually	<p>Unsafe hand tools</p> <p>Employees striking another by tools</p> <p>Burying of personnel or equipment</p> <p>Hands injuries from using tools</p> <p>Dust</p>	<p>Injuries</p> <p>Fatalities</p> <p>Nose, throats and lung irritations, allergic reactions and infections</p>	3	4	M	<p>Excavations to be inspected for safety before working and risk that may pose to be controlled.</p> <p>Personnel not involved in the task to keep away from excavations being backfilled.</p> <p>Tools used for backfilling to be SABS Approved and be inspected for safety before use, employees to be trained on inspecting tools.</p> <p>Employees to keep a safe distance from each other when working on the same excavation, a minimum of 10 meters apart.</p> <p>Employees to wear PPE i.e. steel toed safety boots, leather gloves, dust masks and reflective vests.</p> <p>Task to be conducted under supervision.</p>
Compacting by plant	<p>Noise</p> <p>Vibration</p> <p>Plant striking employees</p> <p>Dust</p>	<p>Noise induced hearing loss</p> <p>Injuries and fatalities</p> <p>Nose, throats and lung irritations, allergic reactions and infections</p> <p>Vibration affecting nearby structures</p>	5	4	M	<p>Employees to keep away from plant and be extra vigilant.</p> <p>Employees to wear PPE i.e., dust masks, reflective vests and ear plucks / ear muffs.</p> <p>Assessment to be done to ensure protection safety of nearby structures from vibration.</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Compacting by hand held equipment	Noise Whole body vibrations Being struck by equipment Ergonomics	Noise induced hearing loss Hand arm vibration syndrome Crush injuries and disabilities Strains, sprains & back injuries	5	4	H	<p>Trained and competent personnel to operate compacting equipment Manufacture's operating instructions to be strictly adhered to.</p> <p>Equipment to be inspected before use and manufacture's maintenance program to be adhered to.</p> <p>Employees in the activity or and close proximity to wear PPE i.e., dust masks, reflective vests, steel toed safety boots and ear plucks / ear muffs Operators to wear anti vibration gloves.</p> <p>Steering wheels to be adjusted to meet height of operators, back to be maintained straight during operation, equipment to be kept close proximity to the body.</p> <p>Employees to be allowed regular breaks / take turns during operation to void exhaustion.</p>

MANUAL HANDLING OF MATERIAL

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Lifting and moving loads by hand	<p>Handling loads that may be difficult to carry in terms of weight and shape</p> <p>Carrying loads for long distances</p> <p>Awkward posture during lifting and handling</p> <p>Poor grasping</p> <p>Pinch point</p> <p>Poor communication during handling</p> <p>Poor housekeeping</p>	<ul style="list-style-type: none"> Back injuries Soft-tissue injuries to wrists, arms, shoulders, neck or legs. <p>Strains, sprains</p> <ul style="list-style-type: none"> Chronic pain 	5	4	H	<p>Manual handling to be avoided as reasonably practicable by using mechanical means i.e., use of pallet truck, forklift truck, powered hoists.</p> <p>Assess risk for every load to be handled.</p> <p>Prevent the risk of injury from manual handling operations that cannot be avoided, i.e.</p> <ul style="list-style-type: none"> Reduce carrying distances, material to be delivered as close to the working area as possible Assessing the weight to be carried to ensure sufficient man power. Ensure proper grasping. Ensure good handling and lifting techniques i.e., keep the load as close to the body, waist as far as possible, avoid twisting the back or leaning sideways, keeping the head up, moving smoothly Plan for rest midway where the distance is long Clear communication & good coordination to be in place <p>Good housekeeping to be implemented in routes used for handling.</p> <p>Training on manual handling procedures to be conducted on employees</p>
Putting down of loads	<p>Unexpected dropping of loads</p> <p>Pinch point</p> <p>Placing of the loads at higher positions</p> <p>Poor housekeeping</p>	<ul style="list-style-type: none"> Hands and fingers, legs and feet injuries 	5	4	H	<p>Throwing loads to the ground to be avoided, loads to be put down smoothly.</p> <p>Placing loads at position above shoulder level to be avoided.</p> <p>Good coordination when resting loads, safe placing of the load simultaneously.</p> <p>Ensure good housekeeping during place / stacking of material.</p> <p>Employees to be trained of the procedures.</p>

WORKING AT HEIGHTS

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Accessing heights	<p>Unsafe means of accessing heights</p> <p>Open edges</p> <p>Collapse of height accessing structure</p>	<p>Falling – Injuries to employees</p> <p>Fatalities</p> <p>Property damage</p>	5	4	H	<p>Fall protection plan to be developed and implemented for accessing and working elevated / below positions which starts from 1.5 meters where the fall risk is present.</p> <p>Scaffolding that complies with SANS 10085 standards should be used as a working platform for heights higher than 1.5 meters</p> <p>Compliant ladders with General Safety Regulations to be used to accessing heights.</p> <p>All open edges with more than 1.5 meters high / below to be barricaded with a strong physical barrier of 1 meters high material that can restrain a person from falling.</p>
Working at heights	<p>Falling from heights</p> <p>Unsafe height accessing equipment</p>	<p>Injuries</p> <p>Fatalities</p> <p>Property damage</p>	5	4	H	<p>All elevated working positions at must have safe working platforms that have guard rails at 1.5 meters high and be strong to prevent a person from falling.</p> <p>Where the elevated position requires provision of working platform; scaffolding must be used.</p> <p>Scaffolding platforms must be safe, stable and without openings.</p> <p>Fall arrest equipment which is a combination of safety harness attached an anchor point or lifeline must be used where it's not practical to install edge protection, Anchor points must be approved by the engineer for stability.</p> <p>Double lanyard safety harnesses must be used and they must be of adequate height to prevent employee from hitting the surface.</p> <p>Positions below elevated positions maintained safe and protected from falling objects.</p>

LADDERS

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Using of ladders	<p>Poor planning</p> <p>Use of ladder with defects</p> <p>Failure to secure or foot ladder correctly</p> <p>Using ladder where to access heights instead of safety height accessing equipment</p> <p>Unsafe means of handling tools while using ladder</p> <p>High winds</p> <p>Poor housekeeping</p>	<p>Slipping and falling</p> <p>Injuries</p> <p>Fatalities</p> <p>Property damage</p>	5	4	H	<p>Assessment to be done to ensure suitability of a ladder for operation of a task.</p> <p>Ladders to be of correct length and type for the indented job.</p> <p>Ladder to be used according to manufactures instruction.</p> <p>Ladders to be inspected before use and all ladders to have numbers.</p> <p>Work supervisor to ensure the following when ladders are used:</p> <ul style="list-style-type: none"> • properly secured at the top • properly footed • do not exceed 75-degree angle when erected <p>Working equipment to be carried on a suitable belt when working on a ladder.</p> <p>Ladders to be not used when there's strong winds.</p> <p>Good housekeeping to be maintained.</p> <p>Ladders to be clean and free from grease and oil.</p>

LIFTING AND TACKLING

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Works' preparation	Wrong selection of equipment Structural failure Crain failure Incompetent operator Site conditions Weather conditions Ground conditions	Crushes Injuries Fatalities Property damage	5	4	H	<p>Lifting not to take place under power lines.</p> <p>Crane and its rigging and lifting accessories to be to be selected in accordance with the type, shape and size of steel to be lifted.</p> <p>Crain to be positioned in a stable foundation approved by a competent person; where doubt exists, professional engineer to be consulted.</p> <p>Crane to operate by competent personnel to carry out the work safely who has a valid certificate of medical fitness.</p> <p>Crane must have in its cab / operators station the following:</p> <ul style="list-style-type: none"> • Operator's manual • Maintenance manual • Load chart • Current annual inspection and certification as follows: <ul style="list-style-type: none"> ▪ Annual load test of 110% of the rated load mass ▪ 3 months' certificates of ropes, chains and hooks <p>The crane must be inspected on daily basis by a competent person wo's operating it and records must be kept o the plant. Crane must be fitted with wind speed device that provides operator with audible warning when wind speeds exceed the designer's specification.</p>
Hooking the load for lifting	Improper handling	Hands and finger crushes	5	4	H	<p>Task to be conducted by competent slinger / signaller.</p> <p>Path of the load must be planned to ensure there's no obstructions or workers under swinging loads</p> <p>To be conducted by a qualified rigger Appropriate PPE to be used i.e., leather gloves, safety boots and helmet</p> <p>Load to be fully secured before lifting</p> <p>Loads to be maintained within the capacity of the crane</p> <p>Crane operations to sopped under the following adverse weather conditions:</p> <ul style="list-style-type: none"> • Poor visibility • Rain
Load lifting and swinging	Falling Caught up of suspended load Crain failure Toppling	Crushes Fatalities Property damage	5	4	H	<p>Competent slinger and signal man to control the operation</p> <p>Signs to be installed to warn works of the operation. Area to be controlled and secured</p> <p>There must be no standing under suspended load</p> <p>Ensure crane operator, rigger and signalman have clear communication</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Swinging the load for proper positioning	Hitting by object Restricted communication	Property damage Injuries Fatalities	5	4	H	<p>Ensure installation of tagline</p> <p>Ensure sufficient manpower to handle tag line</p> <p>Audio warning (crane siren) to be used for area clearance and place signboard</p> <p>Employees working on the activity to wear reflector vests, helmets and leather gloves</p>
Load positioning and removal of gears	Falling from height Miscommunication	Crashes Hand and fingers injuries Body injuries Fatalities	5	4	H	<p>Rigger and Signalmen to properly communicate</p> <p>Landing position to be clear of obstructions and ensure stable and safe positioning of the load</p> <p>Use proper PPE i.e., leather gloves and helmets</p>

STEEL REINFORCEMENT FIXING

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Task preparations	Inadequate planning and training improvisation Poor access	Task based injuries Slips, trips and falls	5	4	H	<p>Competent and sufficiently skilled personnel to be involved in the task.</p> <p>Planning for required equipment and sourcing out to be in place.</p> <p>Competent supervisor to be provided for the task.</p> <p>Clear access to working areas to be prepared; good housekeeping to be implemented and maintained.</p> <p>Safe working procedure to be in place.</p>
Lifting steel reinforcement to the workface	Poor choice of lifting methods Unsafe equipment used Material falling and striking personnel	Serious injury to person/s from loads being lowered onto the deck or uncontrolled fall of load	5	4	H	<p>Mechanical lifting device i.e., crane to be used.</p> <p>Complying equipment to lift the load. All lifting equipment to comply with tackling and lifting requirements i.e., certified rigger to monitor the lifting activities, loads to meet lifting equipment capacity, chains and hooks used for lifting to be compliant.</p> <p>Spotter to be provided to monitor lifting operations and communication to be clear.</p> <p>Steel to be sorted out during to avoid double handling.</p> <p>All objects that may be struck to be cleared.</p> <p>Personnel to be prohibited from moving under lifted loads</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Placing steel reinforcement	Flaky steel Sharp edges Struck by piece of steel Manual handling Constant bending over	Cuts Steel splinters Strains and sprains	5	4	H	Strong leather gloves to be used when handling steel. Employees to wear full body covering overalls. Employees to carry bars that can manage, team lifting to be implemented where necessary. Good coordination when carrying and placing steel Job rotation to allow break from ergonomics
Cutting of steel reinforcement	Operating electric/ gas angle grinder Noise Sparks generation	Electric shocks & electrocution Burns Noise induced hearing loss Eye's damage	5	4	H	Trained and competent personnel to operate grinder to cut steel. Inspection to be done on the electric equipment and electrical cords before use. Inspection to be done on gas hoses and all connection points before activity. Personnel cutting steel to wear PPE; welders' aprons, welders' gloves, face shields & ear protection (ear muff). Fire extinguisher to be less than 50 meters from the activity.
Fixing of steel reinforcement	Repetitious bending, twisting and cutting Insufficient rest periods between jobs Working too fast	Sprains Strains Back pains Muscle pain Cuts	5	4	H	Job rotations to be implemented to allow rest periods. Suitable pliers that minimise adding pressure to be selected for the job. Work to be done at a safe phase. Leather gloves to be worn.

TEMPORARY WORKS

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Work's preparation	Poor design Incompetent person designing temporary works	Structural failure Accidents Injuries, fatalities Property damage	5	4	H	<p>Project Engineer's specification or guidelines must be used as a guideline for designing temporary works.</p> <p>Temporary works must be designed and signed off by a competent temporary works designer who is an Engineer registered with ECSA.</p> <p>Temporary works to be designed to withstand inclement weather without posing safety risks to personnel as per project engineer's specification</p> <p>Method statement for temporary works installation must be signed off by a temporary works designer.</p> <p>Fall protection plan for formworks to be developed.</p>
Temporary works installation	Incompetent personnel supervising and operating in the task Lack of full adhering to the design and method statement	Structural collapse Crushed, injuries and fatalities Property damage	5	4	H	<p>Temporary works to be installed under supervision of a competent temporary works supervisor.</p> <p>Temporary works designer to ensure that foundations are suitable for temporary works installation.</p> <p>All equipment used on temporary works must be as per temporary works designer drawings.</p> <p>All personnel involved in temporary works installation must be trained and fully instructed on their duties.</p> <p>Temporary works to be inspected and approved by the by a temporary works designer in writing before concrete placement.</p> <p>Temporary works must be inspected daily by temporary works supervisor daily during curing period</p> <p>Temporary works designer to issue authorisation on writing before temporary works is removed.</p>
Removal of temporary works	Manual handling Temporary works striking employees	Injuries Crushes Fatalities	5	4	H	<p>Safe working procedure signed by temporary works designer must be provided for removing temporary works.</p> <p>Temporary works to be removed using suitable equipment.</p> <p>Trained personnel to be involved in the operation.</p>

CONCRETE PLACEMENT

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Works' preparations	Poor planning Space availability Ground conditions	Vehicle accidents Ground collapse Accidents Injuries	5	4	H	Works to be planned accordingly; temporary works and reinforcement steel to be completed. Method statement for the works to be activity to be provided. Traffic management plan for the activity to be developed, considering truck routes and parking. Safety files for the concrete supplier to be approved. Ground conditions where the pump truck shall be positioned to be stable, be able to withstand vibrations without safety risk and be approved by a competent person. Personnel involved in the operation to wear PPE; reflective vests, gum boots, long rubber gloves and waterproof aprons, hard hats and goggles.
Concrete pouring	Obstructions Cement splashes resulting in eye, skin contact and environment contamination Concrete skin contacts Engulfment Noise Cement dust	Boom strutting personnel, equipment or structures Injuries, property damage Burns in the skin, dermatitis Eye irritation Nose, throat and lung irritation, silicosis, increased risks of Tuberculosis Environment contamination	5	4	H	Work area to be free of obstruction. Only authorised, trained and instructed personnel to be allowed in the area. Inspection to be done on the done on the structure before concrete pouring. Water to be readily available to clean concrete splashes. Spotter who shall clearly communicate with the pump operator to be provided. Personnel involved in the operation to wear PPE; reflective vests, gum boots, long rubber gloves and waterproof aprons, hard hats, goggles, ear plucks and dust masks.
Vibrating concrete	Unsafe generators and vibrators Untrained personnel operating equipment Cement splashes resulting in eye, skin contact and environment contamination	Crushes Injuries Burns in the skin, dermatitis Eye irritation Nose, throat and lung irritation, silicosis, increased risks of Tuberculosis Environment contamination	3	4	H	Generator and vibrator to be suitable and inspected for safety before use. Trained and competent personnel to vibrate concrete. Personnel involved in the operation to wear PPE; reflective vests, gum boots, long rubber gloves and waterproof aprons, hard hats, goggles, vibration reducing gloves, ear muffs and masks. Task to be done under supervision.

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Mixing concrete by hand	<p>Exposure to cement through inhalation of cement dust</p> <p>Eye contact with cement Powder</p> <p>Hands contact with dry or wet cement</p> <p>Mixing cement directly on the ground</p> <p>Incompetent operator of the concrete mixer</p>	<p>Nose, throat and lung irritation, silicosis, increased risks of Tuberculosis</p> <p>Burns in the skin, dermatitis Eye irritation</p> <p>Environment contamination</p> <p>Injuries</p>	5	4	H	<p>Competent operator to operate concrete mixer.</p> <p>Employees to avoid eye contact with dry powder cement.</p> <p>Employees to wear rubber gloves when working with cement.</p> <p>Employees to wear dust masks when working with powdered cement.</p> <p>Cement to be only mixed on a concrete of over an impermeable material to prevent environmental damage.</p>

FLAMMABLE SUBSTANCES USE AND STORAGE

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Handling and storage in small quantities of diesel, petrol and flammables	Fire Explosion Skin and eye contact Environmental pollution Slip/ falls from spillages	Injury to employee/ personnel Property damage Environmental damage Dermatitis Eye irritation	5	4	H	<p>Flammable should only be handled by trained personnel.</p> <p>Material safety data sheet (MSDS) for chemicals to be provided.</p> <p>PPE required when handling the flammable should be worn as per MSDS specifications.</p> <p>Flammable liquids to be stored as per supplier's recommendations in a ventilated room or cage.</p> <p>Fuel to be stored in suitable containers as per MSDS, in a secured and well-ventilated area.</p> <p>Sources of ignition should be not allowed in the storage area.</p> <p>Spills to be cleaned up immediately and prevented from environmental contamination.</p> <p>A spill kit shall be provided on site.</p> <p>No smoking / no naked flame sign should be displayed next to the storage area.</p> <p>Fire extinguisher should be placed or easily accessible from the area.</p>
Refuelling plant	Fire/explosion, static-ignition from refuelling operations	Injuries Fatalities Property damage and loss	5	4	H	<p>Store fuel only in approved containers / pumps</p> <p>Engine must be switched off when topping up fuel and lubrication oil.</p> <p>Locate fire extinguisher in vehicles</p> <p>No smoking permitted during refuelling activities. Carry out the work in well ventilated work area follow the MSDS instructions.</p> <p>Re-fuelling operations and Plant (machines) to be located in a designated fuelling area e.g. bunding/spill kit area, away from pedestrian movement and where practical, operations should take place in an open and well ventilated area away from buildings structures and shelters.</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Refuelling small plant items i.e. Generators and compactors	Fire/explosion, static-ignition from refuelling operations	Injuries Fatalities Property damage and loss	5	4	H	<p>PPE to be worn</p> <p>Re-fuelling operations to be located in a designated fuelling area e.g., Bunding/spill kit area, away from pedestrian movement and where practical, operations should take place in an open and well-ventilated area away from buildings structures and shelters.</p> <p>Approved fuel containers to be used Refuelling to be done in a flat surface Funnel to be used</p> <p>Before re-fuelling small plant items allow enough time for the cooling down of engine and exhaust</p> <p>Ensure location of fire extinguishers and spill kits in the vehicles and on site</p> <p>No naked flames or sources of ignition should be in the vicinity</p>

GENERAL ACTIVITIES

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Using of personal protective equipment	Hazards related to employees not wearing the required protective apparel.	Injuries Death	5	4	H	<p>Ensure that employees have been issued with the appropriate protective equipment required and replace such apparel if damaged.</p> <p>Induct employees with regard to the potential dangers associated with not wearing the required protective equipment</p> <p>Train supervisors to ensure that the required protective equipment is indeed being worn by employees when the task is executed.</p> <p>Institute disciplinary action against employees who fail to wear the protective.</p>
General sanitation and hygiene; provision of welfare facilities	Hazards resulting from diseases related to poor sanitation and hygiene, and other diseases.	Diseases Death	5	4	H	<p>Employee's facilities to be adequately provided at the workstations such as hygienically maintained ablutions, toilet paper, safe drinking water, sheltered eating areas and first aid kits.</p> <p>Induct employees with regard to sanitation and hygiene issues, and related diseases.</p> <p>Induct employees with regard to the necessity to seek immediate medical treatment with respect to any injuries sustained on site, however minor.</p> <p>Keep contact details for emergency services prominently displayed in the site office.</p>


ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Emergency evacuation of injured personnel in the case of life-threatening injuries	Hazards related to delays in providing appropriate medical attention.	Injuries Permanent disability Death.	5	4	H	<p>Plan then implement appropriate emergency evacuation procedures to be followed in such instances when there may not be time to await the arrival of the emergency services.</p> <p>Keep snakes antivenom on site</p> <p>Induct employees with regard to the procedures to be followed in such instances.</p> <p>Keep contact details for emergency services prominently displayed in the site office.</p> <p>Contact the staff at the relevant institution to forewarn them of the status quo of the casualty en route, so that they can prepare for their arrival and possibly even have paramedics intercept the casualty en route.</p>
Housekeeping maintenance	Material in undesignated positions Equipment and tools lying all over Scraps and rubble in undesignated positions	Trips and falls Injuries Low working moral	5	4	H	<p>Good housekeeping to be implemented and maintained on site.</p> <p>All material to be placed in designated positions.</p> <p>Laydown, stacking and storage areas to be demarcated.</p> <p>Rubble to be continuously removed from workstations to designated collection areas which are demarcated</p> <p>Time to be allowed for housekeeping i.e., before each break and at the end of the shift.</p> <p>Waste to not be allowed to accumulate on site and be continuously removed for disposal at approved site.</p>

OCCUPATIONAL DISEASES: COVID 19

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Works preparations	<p>Lack of information on the COVID-19 virus management</p> <p>Lack of competent personnel to manage virus on site</p> <p>Lack of recourses for implementing programs to prevent the spread of COVID-19 virus</p>	<p>Spread of COVID-19 at the workplace</p> <p>Sicknesses</p> <p>Low work moral</p> <p>Loss in production due to loss of skilled and general personnel</p> <p>Financial impacts on replacing staff</p> <p>Shut down of the operations</p>	5	4	H	<p>Information, developments, government regulations and guidelines on COVID-19 to be uptodate on site. Contracts Manager, Construction Manager and Safety Officer to keep updated from reliable sources i.e., government website or government gazette on the virus.</p> <p>Site to comply with COVID-19 regulations and guidelines issued under the under-the Disaster Management Act in conjunction with the Occupational Health and Safety Act and Regulations.</p> <p>COVID-19 management plan and programs to be developed for the site.</p> <p>Site to designate personnel for COVID-19 management. COVID-19 is a novel disease, the site to ensure procurement of information from reliable sources and consult the Safety Agent when in doubt.</p> <p>Site to plan activities to be conducted and number of employees to be procured in compliance with COVID-19 guidelines of social distancing.</p> <p>Management to prepare to provide resources requirement for managing, preventing and controlling COVID-19 virus spread on site</p>
Transportation and construction vehicles operations	<p>Transportation or construction vehicle contaminated with the virus</p> <p>Lack of complying with social distancing</p>	<p>Infections</p> <p>Sicknesses</p>	5	4	H	<p>Site to ensure employees transportation used on site allows social distancing.</p> <p>Transportation surfaces to be sanitized before employees embark on it.</p> <p>All personnel to sanitize their hands before embarking on transportation.</p> <p>Where practical, site construction vehicles to be not shared.</p> <p>In case of sharing site vehicles/ plant. Operator to sanitize the construction vehicle/ plant before and after use</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Commencing of works on site	<p>Procuring personnel who are infected or carriers of the COVID-19 virus</p> <p>Lack of measures in place for preventing the spread of COVID-19 virus on site</p> <p>Lack of information and training to personnel on site</p>	<p>Spread of infection amongst site personnel</p> <p>Challenges with managing personnel</p>	5	4	H	<p>Personnel to be screened for COVID-19 before being allowed to work on site, screening to be conducted by competent personnel following Department of Health screening guidelines.</p> <p>Employees to be trained on COVID-19 virus, risk factors, signs and symptoms and preventative measures.</p> <p>Only employees who have been deemed safe to work on site after the screening test to work under stringent hygiene management.</p> <p>Employees with signs and symptoms for the virus to be secluded from work and be referred to a Doctor/ Health Practitioner.</p> <p>Personnel who had symptoms or who have tested positive for COVID-19 to only return to work once they have received clearance from a Doctor.</p> <p>Site to develop trust with employees and encourage them to communicate and report signs and symptoms of the virus if / when they start experiencing them.</p> <p>Employees to be trained on remuneration and compensation measures in place with regards to COVID-19 infection.</p>
Implementing COVID-19 management programs on site	<p>Lack of complying with COVID-19 preventative requirements</p> <p>Allowing employees to site without hygiene requirements in place</p> <p>Poor hygiene on employees</p>	<p>Spread of the virus</p> <p>Infections on site</p> <p>Employees taking time off work</p> <p>Lack of production</p> <p>Site shutting down</p>	5	4	H	<p>All personnel entering the site to wear masks.</p> <p>All personnel to have their hands disinfected through using of alcohol-based hand sanitizer or washing their hands when entering the work place.</p> <p>Employees to be trained on hygiene requirements for COVID-19.</p> <p>Employees to be trained on personal hygiene.</p> <p>Surfaces to be continuously disinfected on site.</p> <p>Employees to be trained hand washing or hand sanitizing continuously on site</p> <p>Work place to be kept clean and hygienic, surfaces (tables, computer keyboards), ablution facilities to be wiped up with disinfectant regularly</p> <p>Site to display notices and awareness information on COVID-19 prevention measures</p>

ACTIVITY	POTENTIAL HAZARDS IDENTIFIED	HEALTH AND SAFETY AND RISKS	RISK ANALYSIS			CONTROL MEASURES
			P	C	R	
Conducting activities at the work place	Tasks requiring close contact with a fellow worker PPE maintenance Poor storage of PPE	Risk of contamination with the virus from one person to the other	5	4	H	<p>Social distancing to be implemented as far as reasonably practicable at the work place i.e.: one and half meter distancing between personnel during works.</p> <p>Employees who require to assist each other and get closer than prescribed distancing to wear face shields.</p> <p>Employees to be trained on taking care and disinfecting of their PPE, sharing of PPE to be prohibited.</p> <p>PPE to be marked to avoid mixing, space to be designated for storing PPE safely</p> <p>Space to be provided for storing personal belongings separately.</p>
Visitors / suppliers entering site	Infected personnel entering the site	Potential of spreading the virus	5	4	H	<p>Visitors and suppliers must be screened at the site entrance i.e., temperature testing before being allowed on site.</p> <p>Visors to arrive on site wearing face masks.</p> <p>Visitors must bring their own PPE for the site i.e., reflecting vests and</p> <p>Visitors and suppliers must be trained on site COVID-19 requirements and rules.</p> <p>Face to face meetings to be avoided where practical.</p> <p>Preparation for space that shall allow for social distancing and maintenance of hygiene to be in place for compulsory meetings.</p>
Waste management	Improper handling of COVID-19 waste Unsafe disposal of COVID-19 waste	Risk of contamination and spread of the virus	5	4	H	<p>COVID-19 waste must be handled as biohazard waste and be treated separately from general waste.</p> <p>Separate bins with tight closing, foot operated lids must be provided discarding off COVID-19 waste.</p> <p>COVID-19 waste bins to be clearly labelled.</p> <p>COVID-19 waste bins to be provided with plastics that shall be tightly sealed before disposal.</p> <p>Bins to be placed in strategic locations of the site i.e., work stations, welfare facilities and offices.</p> <p>Time of 72 hours to be delayed to allow the virus to die before waste is disposed of to the municipal waste.</p> <p>Employees to be trained on waste management.</p>

Compiled by	Approved by
Construction Health and Safety Agent: Phungashe Health and Safety Consulting	Accepted: Department of Transport
Name: Ayanda Buthelezi	Name:
	

D3.3 Guidelines for construction and maintenance projects under Covid-19 Lockdown

The Employer has prepared guidelines which set out the key principles and minimum requirements that define responsible, healthy and safe operations for road construction operations under COVID-19 Lockdown conditions, for the Contractor to comply with. In addition, the Contractor shall comply with any new COVID-19 Regulations issued by Government.

The guidelines have been included as Annexure A at the end of this Project Document.

D4. APPLICATION FOR CONSTRUCTION WORK PERMIT

Where the contract meets the requirements of Construction Regulation 3, the Employer must at least 30 days before commencement of the work and in accordance with the requirements of Construction Regulation 3, apply to the Provincial Director of the Department of Labour in writing for a construction work permit to perform construction work. The Employer's application must be done in a form similar to Annexure 1 of the Construction Regulations, and submitted with the required documentation, some of which the Contractor shall provide as stated in the Contract Data.

A copy of the construction work permit must be kept on site in the occupational health and safety file, available for inspection by inspectors, the Employer, the Employer's Agent, the Construction Health and Safety Agent, subcontractors, employees, representative trade unions and any other persons on the site. The Provincial Director will assign a site-specific number for each construction site, which must be conspicuously displayed at the main entrance to the site.

D5. NOTIFICATION OF CONSTRUCTION WORK

Where the contract meets the requirements of Construction Regulation 4, the Contractor shall, before commencement of the work and in accordance with the requirements of Construction Regulation 4, notify the Provincial Director of the Department of Labour of the intention to carry out the construction work, using the pro forma form included as Annexure 2 to this Health and Safety Specification.

A copy of the notification form must be kept on site, available for inspection by inspectors, the Employer, the Employer's Agent, the Construction Health and Safety Agent, subcontractors, employees, representative trade unions and any other persons on the site. A copy of the notification form shall also be kept on the health and safety file, and a further copy shall be forwarded to the Employer for his records.

D6. HEALTH AND SAFETY PLAN

Before commencement of any construction work, the Contractor shall prepare a project specific Health and Safety Plan complying with the requirements of Construction Regulation 7(1)(a) and this Health and Safety Specification.

The Health and Safety Plan must include a risk assessment performed and recorded in writing by a competent person as required in terms of Construction Regulation 9. The risk assessment shall identify and evaluate the risks and hazards that may be expected during the execution of the work under the contract, and it shall include a documented plan and applicable safe work procedures to mitigate, reduce or control the risks and

hazards identified.

The Health and Safety Plan shall be available on site for inspection by inspectors, the Employer, the Employer's Agent, subcontractors, employees, representative trade unions, and health and safety representatives and committee members, and must be monitored and reviewed periodically by the Contractor.

D7. APPOINTMENT OF EMPLOYEES AND SUBCONTRACTORS

D7.1 Appointments

The Contractor shall appoint in writing all employees.

The Contractor shall appoint in writing all subcontractors, and such appointments shall be in compliance with the requirements of Construction Regulation 7.

D7.2 Health and safety induction training

No person shall be allowed or permitted to enter the site of the works unless such person has undergone health and safety induction training pertaining to the hazards prevalent on the site.

The Contractor shall ensure that all employees under his control, including subcontractors and their employees, undergo health and safety induction training by a competent person before commencement of construction work in compliance with Construction Regulations 7(5) and 9(3) and (4).

The Contractor shall ensure that all visitors to the construction site undergo health and safety induction and are provided with the necessary personal protective equipment in compliance with Construction Regulation 7(6).

D7.3 Medical certificate of fitness

The Contractor shall ensure that every employee, including subcontractors and their employees, has a valid medical certificate of fitness issued in compliance with Construction Regulation 7(1)(g) or 7(8) as applicable.

D8. APPOINTMENT OF SAFETY PERSONNEL

D8.1 Construction manager

Refer to Construction Regulation 8(1), (2), (3) and (4).

The Contractor shall appoint a full-time **Construction Manager** with the duty of managing all the construction work on the site, including the duty of ensuring occupational health and safety compliance.

The Contractor may also have to appoint one or more **assistant construction managers** to assist the Construction Manager where justified by the scope and complexity of the works.

D8.2 Construction health and safety officer

Refer to Construction Regulation 8(5) and (6).

Taking into consideration the size of the project and the dangers, hazards or risks that can be expected, the Contractor shall appoint in writing a full-time or part-time **construction health and safety officer** to assist in the control of all health and safety related aspects on the site. The construction health and safety officer shall be registered as required by the Chief Inspector of the Department of Labour and shall have the necessary competencies and resources to assist the Contractor.

D8.3 Construction supervisor

Refer to Construction Regulation 8(7), (8), (9) and (10).

The Contractor shall appoint a **construction supervisor** responsible for construction activities and ensuring

occupational health and safety compliance on the construction site.

The Contractor may also have to appoint one or more competent employees to assist the construction supervisor where justified by the scope and complexity of the works.

D8.4 Health and safety representatives

In terms of Sections 17 and 18 of the Act (OHSA 1993) the Contractor, being the employer in terms of the Act for the execution of the contract, shall appoint a **health and safety representative** whenever he has more than 20 employees in his employment on the site of the works. The health and safety representative must be selected from employees who are employed in a full-time capacity at a specific workplace.

The number of health and safety representatives for a workplace shall be at least one for every 50 employees.

The function of health and safety representative(s) will be to review the effectiveness of health and safety measures, to identify potential hazards and major incidents, to examine causes of incidents (in collaboration with his employer, the Contractor), to investigate complaints by employees relating to health and safety at work, to make representations to the employer (Contractor) or inspector on general matters affecting the health and safety of employees, to inspect the workplace, plant, machinery, etc. on a regular basis, to participate in consultations with inspectors and to attend meetings of the health and safety committee.

D8.5 Health and safety committee

In terms of Section 19 of the Act (OHSA 1993), the Contractor (as employer) shall establish one or more **health and safety committees** where there are two or more health and safety representatives at a workplace. The persons selected by the Contractor to serve on the committee shall be designated in writing.

The function of the health and safety committee shall be to hold meetings at regular intervals but at least once every three months, to review the health and safety measures on the contract, to discuss incidents related to health and safety with the Contractor and the inspector, to make recommendations regarding health and safety to the Contractor and to keep record of recommendations and reports made by the committee.

D8.6 Competent persons

The Contractor shall appoint in writing designated competent employees and/or other competent persons as required by the Act and Regulations. Such appointments shall be in accordance with the relevant applicable sections of the Act and Regulations as determined by the requirements of the contract.

A competent person may be appointed for more than one part of the construction work with the understanding that the person must be suitably qualified and able to supervise at the same time the construction work in all the work situations for which he has been appointed.

The appointment of competent persons to supervise parts of the construction work does not relieve the Contractor from any of his responsibilities for compliance with **all** requirements of the Construction Regulations.

D9. RECORDS AND REGISTERS

The Contractor shall keep records and registers related to health and safety on site as required by the relevant applicable sections of the Act and Regulations as determined by the requirements of the contract. Such records and registers shall be available for periodic inspection by inspectors, the Employer, the Employer's Agent, the Construction Health and Safety Agent, subcontractors, employees and representatives of trade unions.

D10. CONTRACTOR'S RESPONSIBILITIES

For this contract the Contractor will be the mandatary of the Employer (Client), as defined in the Act (OHSA 1993), which means that the Contractor has the status of employer in his own right in respect of the contract. The Contractor is therefore responsible for all the duties and obligations of an employer as set out in the Act (OHSA 1993) and the Construction Regulations 2014.

Before commencement of work under the contract, the Contractor shall enter into an agreement with the Employer (Client) in terms of C1.4 'Agreement in terms of Section 37(2) of the Occupational Health and Safety Act No. 85 of 1993', to confirm his status as mandatary (employer) for the contract under consideration.

The Contractor is advised in his own interest to make a careful study of the Act and the Construction Regulations, as ignorance of the Act and the Regulations will not be accepted in any proceedings related to non-conformance to the Act and the Regulations.

D11. MEASUREMENT AND PAYMENT

It is a condition of this contract that contractors who submit tenders for this contract shall make provision in their various tendered rates and prices for all costs related to the health and safety measures required in terms of the Act and Regulations during the construction process.

(a) Health and safety plan

The Contractor shall assess the risks associated with the Works when preparing the health and safety plan. In addition, the Contractor shall implement the health and safety plan, including the provision of a dedicated, full time health and safety officer, carrying out all the required site health and safety training and briefings, staff medical evaluations, monitoring and administrating the health and safety plan and for supplying all transport, personal protection safety items, other health and safety equipment, safety notices and any other health and safety related items that are required on site. Provision is made for the costs of preparing and implementing the health and safety plan in item C 1.2.5.1 of the Bill of Quantities.

(b) Safety appointments

No separate additional payment will be made to cover the costs related to persons appointed as required in terms of the Act and Regulations to fulfil the various health and safety functions. Such persons include the Construction Manager, any assistant construction managers, the construction health and safety officer, the construction supervisor, any assistant construction supervisors, health and safety representatives, health and safety committee members and competent persons, all as referred to in subclauses E8.1 to E8.6 above. The Contractor shall therefore make provision in the various tendered rates and prices for all costs related to such persons, and for which no separate additional payment will be made except to the extent provided in item C 1.2.5.2 of the Bill of Quantities.

(c) Records and registers

The keeping of records and registers related to health and safety on site as described in clause E9 above shall be regarded as a normal duty of the Contractor for which payment shall be deemed to be included in the Contractor's various tendered rates and prices, and for which no separate additional payment will be made except to the extent provided in item C 1.2.5.2 of the Bill of Quantities.

(d) Medical certificates

No separate additional payment will be made to cover the costs related to obtaining the medical certificates of fitness required for every employee, including subcontractors and their employees, issued in compliance with Construction Regulation 7(1)(g) or 7(8) as applicable. The Contractor shall therefore make provision in the various tendered rates and prices for all costs related to such medical certificates, and for which no separate additional payment will be made except to the extent provided in item C 1.2.5.2 of the Bill of Quantities.

**ANNEXURE 2
OCCUPATIONAL HEALTH AND SAFETY ACT, 1993
(Regulation 4 of the Construction Regulations, 2014)**

NOTIFICATION OF CONSTRUCTION WORK

1. (a) Name and postal address of principal contractor:

.....

(b) Name and telephone number of principal contractor's contact person:

.....

Principal contractor's compensation registration number:

3. (a) Name and postal address of client:

.....

.....

(b) Name and telephone number of client's contact person or agent:

.....

4. (a) Name and postal address of designer(s) for the project:

.....

.....

(b) Name and telephone number of designer's(s') contact person(s):

.....

.....

.....

5. Name and telephone number of principal contractor's construction manager on site appointed in terms of regulation 8(1):

.....

6. Name(s) of principal contractor's assistant construction manager(s) on site appointed in terms of regulation 8(2):

ANNEXURE 2 - Continued

7. Exact physical address of the construction site or site office:

8. Nature of the construction work:

.....
.....

9. Expected commencement date:

10. Expected completion date:

.....

11. Estimated maximum number of persons on the construction site:

Total: Male: Female:

.....

12. Planned number of contractors on the construction site accountable to principal contractor:

.....

13. Name(s) of contractors already selected:

.....
.....
.....

.....
Principal Contractor **Date**

.....
Client's Agent (where applicable) **Date**

.....
Client **Date**

- THIS DOCUMENT IS TO BE FORWARDED TO THE OFFICE OF THE DEPARTMENT OF LABOUR **PRIOR TO COMMENCEMENT** OF WORK ON SITE.

C3.3 PARTICULAR SPECIFICATIONS

PART E: EXPANDED PUBLIC WORKS PROGRAMME

PART E: EXPANDED PUBLIC WORKS PROGRAMME

E1. SCOPE

This part provides the specifications with regard to the following:

- (a) The Expanded Public Works Programme (EPWP); and
- (b) The National Youth Service (NYS) programme, which is a government programme implemented by the National Department of Public Works forming part of the Expanded Public Works Programme (EPWP).

The Contractor shall be required to participate in job creation (employment of local labour) by executing various portions of the Works using local labour (unskilled or semi-skilled), recruited from the local community, who are South African Citizens or foreigners in possession of a work visa issued by the Department of Home Affairs (only one such foreigner may be employed on any project). Such local labour shall be the targeted participants in the EPWP and NYS programmes.

Furthermore, in order to avoid duplication of training facilities, the provision of training facilities for all structured training, including for the structured training described in PART F: Small Contractor Development (in those instances where PART F is included in the contract), shall be measured and paid for in terms of the pay items provided in this Part E.

E2. EXPANDED PUBLIC WORKS PROGRAMME (EPWP)

E2.1 Labour enhanced construction, supervision and management for the Expanded Public Works Programme (EPWP)

The Expanded Public Works Programme (EPWP) is a multi-sectoral government initiative to create jobs. In the case of the infrastructure sector, existing government expenditure is realigned using labour enhanced technologies to create job opportunities. This involves the use of both labour and construction equipment, where labour is preferred and construction equipment is used appropriately.

All work undertaken in terms of the Expanded Public Works Programme (EPWP) shall be implemented using labour enhanced construction methods to the extent economically feasible, in accordance with the "Guidelines for the Implementation of Labour-Enhanced Infrastructure Projects under the Expanded Public Works Programme (EPWP) Third Edition 2015".

The aforementioned guidelines can be downloaded from the EPWP website of the Department of Public Works (<http://www.epwp.gov.za/>).

Items scheduled for labour-intensive construction are marked with the letters "LI" in the bill of quantities in the manner described in C2.1 Pricing Assumptions.

Contractors shall note that they shall employ in labour-enhanced works only the following supervisory and management staff that have completed the required Skills Programme in terms of Appendix C of the aforementioned guidelines:

- (a) Foremen / Supervisors at NQF level 4 "National Certificate: Supervision of Civil Engineering Construction Processes";
- (b) Site Agent / Construction Manager at NQF level 5 "Manage Labour-Enhanced Construction Processes" or equivalent Quality Council for Trades and Occupations (QCTO) qualifications at NQF level 5 or 7.

In addition to their normal supervisory and management functions, the aforementioned supervisory and management staff shall also be responsible for setting the workers' daily tasks in accordance with labour-enhanced construction principles, and for ensuring that the EPWP job creation reporting data is accurately recorded on a daily basis and compiled and submitted to the Employer each month in accordance with clause E4 of this PART E.

E2.2 Labour laws applicable to the Expanded Public Works Programme (EPWP)

The work to be undertaken on this contract by unskilled or semi-skilled workers under the Expanded Public Works Programme (EPWP) shall be implemented in accordance with:

- (a) the Code of Good Practice for Employment and Conditions of Work for Expanded Public Works Programmes (EPWP), issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No. 129 of 18 February 2011 (Government Gazette No. 34032 of 18 February 2011); and
- (b) Ministerial Determination 4: Expanded Public Works Programmes, issued in terms of the Basic Conditions of Employment Act of 1997 by the Minister of Labour in Government Notice No. R347 of 4 May 2012.

The aforementioned Government Notice No. R347 contains the standard terms and conditions for workers employed in elementary occupations on an Expanded Public Works Programme (EPWP). These terms and conditions do not apply to persons employed in the supervision and management of an Expanded Public Works Programme (EPWP).

The above documents can be downloaded from the EPWP website of the Department of Public Works (<http://www.epwp.gov.za/>).

E2.3 Persons to be employed under the Expanded Public Works Programme (EPWP)

All local labour required for the execution of labour-enhanced works shall be engaged strictly in accordance with prevailing legislation.

The Contractor shall, through the Project Liaison Committee (PLC) and with the assistance of the Community Liaison Officer (CLO), inform the local community of the labour-enhanced works proposed and the employment opportunities thereby presented.

The Contractor shall determine the minimum education level / skills required to undertake the works specified. In consultation with the PLC and the War Room convener for each relevant ward, selection of the local labour shall be made from households on the Operation Sukuma Sakhe (OSS) database profiled through the War Room for each ward. The list obtained from the OSS database must be accompanied by a letter from the War Room convener confirming that all the information provided was sourced from the War Room and that all listed incumbents reside within the relevant ward. The Contractor must maintain records of household profiles as part of the portfolio of evidence for selection. Selection shall be based on the minimum education level / skills required and the most-needy households, as determined by the household profiling. Preference shall be given for at least one person from each household in the community to be employed before further persons are considered for selection.

The Contractor shall endeavour to ensure that the number of temporary jobs using local labour (unskilled or semi-skilled), recruited from the local community, who are South African Citizens or foreigners in possession of a work visa issued by the Department of Home Affairs (only one such foreigner may be employed on any project), shall include for a minimum allocation of:

- (a) 60% women;
- (b) 55% youth who are between the ages of 18 and 35; and
- (c) 2% persons with disabilities.

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

The contractor shall comply with the minimum supervisor to worker ratio stated below, required to ensure the effective supervision of the labour-enhanced works for all LI activities undertaken on this project:

Minimum supervisor to worker ratio = 1:10

E2.4 Contract of employment with persons employed under the Expanded Public Works Programme (EPWP)

The Contractor shall enter into a formal contract of employment with each person employed under the Expanded Public Works Programme (EPWP), using the pro forma contract of employment attached at the end of this PART E of section 3.3 Particular Specifications.

The Contractor shall note that all such formal contracts of employment entered into with persons employed under the Expanded Public Works Programme (EPWP) shall expire on 31 March each year, and the Contractor shall therefore be required to enter into new contracts with such persons as of 1 April each year.

E2.5 Employment of targeted labour under the Expanded Public Works Programme (EPWP)

The Contractor shall be contractually obliged to:

- (a) brief EPWP workers on the conditions of employment;
- (b) enter into a formal contract of employment with each EPWP worker, which contract will form part of the Employment Agreement;
- (c) keep personnel files for all EPWP workers and make copies available to the Employer if and when requested; and
- (d) ensure that payments to EPWP workers are made in accordance with Government Notice No. R347.

The rate of pay for persons employed under the Expanded Public Works Programme (EPWP) shall be the gazetted rate:

- (i) per task (for task-rated workers); or
- (ii) per day (for time-rated workers).

During those periods when an EPWP worker is engaged in formal classroom training (other than in-service training), the rate of pay shall be equal to the minimum wage rate as set on an annual basis in the Ministerial Determination for the Expanded Public Works Programme.

Tasks set by the Contractor shall be such that:

- (a) the average EPWP worker completes 5 tasks per week in 40 hours or less; and
- (b) the weakest EPWP worker completes 5 tasks per week in 55 hours or less.

The Contractor shall revise the time taken to complete a task whenever it is established that the time taken per week to complete the tasks set does not fall within the limits indicated in (a) and (b) above.

E2.6 Training of persons employed under the Expanded Public Works Programme (EPWP)

The training of persons employed under the Expanded Public Works Programme (EPWP) is described in clause E4 below.

E2.7 Contractor's obligations towards persons employed under the Expanded Public Works Programme (EPWP)

Over and above implementing in accordance with Government Notice Nos. 129 and R347 the EPWP work to be undertaken on this contract, it shall be the responsibility of the Contractor to carry out the following functions with respect to the EPWP workers:

- (a) ensure that all participants are covered by the Compensation for Occupational Injuries and Diseases Act, 1993, for as long as they are contracted to the Contractor, and pay in full to the Compensation Commissioner such amounts as are due in terms of the Act;
- (b) pay in full to the Unemployment Insurance Fund for all participants such UIF contribution amounts as are due in terms of the Unemployment Insurance Act, 2001, as amended, and the Unemployment

- Insurance Contributions Act, 2002, as amended, and provide proof of such UIF payments upon request;
- (c) ensure that all participants are paid their wages on time through the pre-agreed payment method as stipulated in the participant contract of employment;
 - (d) implement health and safety procedures with respect to the participants, ensuring that the health and safety regulations are adhered to;
 - (e) ensure that all participants receive induction on site safety prior to commencing with work on site;
 - (f) provide all participants with the necessary protective clothing and equipment as required by law for the specific tasks in which the participants are involved, in addition to the branded overalls stipulated for EPWP workers;
 - (g) provide safe on-site storage facilities for apparel and tools issued to the participants;
 - (h) assist in the assessment of participants with regard to their competencies;
 - (i) provide overall supervision and day-to-day management of participants; and
 - (j) implement strict quality control to ensure that the work carried out by the participants is of the required standard, and, where necessary, to train and mentor the participants to assist them in achieving the standards required.

E2.8 Apparel and tools for persons employed under the Expanded Public Works Programme (EPWP)

The Contractor shall provide Personal Protective Equipment (PPE) to all EPWP workers in accordance with the requirements arising from PART D: OHS 1993 Health and Safety Specification and the Contractor's site-specific health and safety plan and accompanying risk assessments.

Where indicated below, certain items of the PPE issued by the Contractor to the EPWP workers shall include branded EPWP markings in accordance with the attached branding requirements.

PPE shall comprise the following:

- (a) Compulsory PPE issued to all EPWP workers for use during general work activities:
 - (i) Protective overalls (two sets), Pentone Yellow in colour, with EPWP branding;
 - (ii) Lime green reflective safety vest with EPWP branding;
 - (iii) Protective footwear; and
 - (iv) Protective gloves.
- (b) PPE issued to EPWP workers for specific activities where required in terms of the Contractor's site-specific health and safety plan and accompanying risk assessments, such as:
 - (i) Protective headwear, green in colour, with EPWP branding;
 - (ii) Protective eyewear such as spectacles and goggles;
 - (iii) Protective face shields;
 - (iv) Protective earplugs and earmuffs;
 - (v) Respiratory masks;
 - (vi) Disposable safety apparel;
 - (vii) Kidney belts;
 - (viii) Safety harnesses; and
 - (ix) Any other protective equipment identified.

The Contractor shall replace any item of issued PPE that becomes unserviceable.

The Contractor shall not charge any fee to the EPWP workers for the prescribed PPE issued except under the following circumstances:

- (i) where the employee requests the issue of additional PPE in excess of what is prescribed;
- (ii) where the employee has patently abused or neglected the issued PPE leading to early failure; or
- (iii) where the employee has lost the issued PPE.

The Contractor shall instruct and train the EPWP workers in the use of all PPE issued, and shall ensure that

they use the prescribed equipment.

EPWP workers shall not have the right to refuse to use or wear the equipment prescribed by the Contractor. If it is not possible for an EPWP worker, through health or any other reason, to use or wear the prescribed PPE issued, such employee shall not be allowed to continue working under the hazardous conditions for which the equipment was prescribed. Under such circumstances an alternative solution shall be found, and this may include relocating or discharging the employee.

The Contractor shall provide each EPWP worker with hand tools of adequate quality and of the type required to carry out the assigned tasks safely and efficiently.

The Contractor shall instruct and train the EPWP workers in the safe and efficient use of all hand tools issued.

The Contractor shall maintain the issued tools in a serviceable and safe working condition.

The EPWP workers shall be responsible for the safe on-site storage of all PPE and tools issued to them, using the storage facilities provided on site by the Contractor.

No separate payment shall be made for providing the EPWP workers with PPE, or for providing relevant items of PPE in the specified colours with branded EPWP markings. Furthermore, no separate payment shall be made for providing the EPWP workers with hand tools or for providing them with safe storage facilities on site for PPE and tools. The Contractor shall therefore make provision for all costs related to providing the PPE, tools and safe storage facilities in the tendered rates and prices for the various items of work scheduled throughout the bill of quantities.

E2.9 EPWP contract signboard

The Contractor will be required to erect a contract signboard displaying the EPWP logo, indicating that this project is part of the Expanded Public Works Programme (EPWP). Provision for the costs related to the provision, erection and subsequent removal of the contract signboard is made in pay item provided in chapter 1.3 of the bill of quantities for this purpose.

E2.10 Payment matters relating to the EPWP work

E2.10.1 General

No separate pay items shall be provided in terms of PART E of the bill of quantities for the construction work activities carried out by EPWP participants. Payment for such work activities shall be made only indirectly, in terms of the pay items scheduled for the work activities in which such persons are engaged.

Furthermore, no direct payment will be made to cover the Contractor's costs associated with implementing the on-site work programme for the EPWP participants, for planning, organising, directing, controlling and administrating their day to day activities, including the setting of daily tasks, record keeping and any on-site liaison, training and mentoring required, and for the associated job creation reporting, and such costs shall therefore be built into the rates tendered for the various items of work scheduled throughout the bill of quantities.

E2.10.2 Payment for labour-enhanced components of the work

Payment will be made for items which are designated for labour-enhanced construction in the bill of quantities only in those instances where such items are constructed using labour-enhanced methods.

Any unauthorised use of construction equipment to carry out work which was scheduled to be carried out using labour-enhanced methods will not be condoned and any Works so constructed will not be certified for payment. Any non-payment for such Works shall not relieve the Contractor in any way from his obligations either in contract or in delict.

During the course of construction, as a result of unforeseen site conditions or operating conditions encountered, it may happen that an item designated for labour-enhanced construction can no longer be carried out in a safe and economically feasible manner, either in full or in part, using labour-enhanced

methods. In such instances the Employer's Agent shall, where necessary, order a variation in terms of clause 6.3 of the of the General Conditions of Contract 2015 with respect to that portion of the item quantity that cannot be carried out using labour-enhanced methods.

E2.11 Penalty applicable to any shortfall in the local labour content achieved

The amount spent on wages for local labour (excluding VAT) for this project, as certified by the Employer's Agent, shall equal or exceed the specified minimum percentage of the contract amount which is the Contract Price (adjusted to exclude penalties and value added tax).

The Contractor is obliged to commit to or exceed the specified minimum percentage of local labour content stated in section C1.2.2 Data Provided by the Employer.

In the event that the Contractor fails to substantiate that any failure to achieve the minimum required local labour content for this project is due to quantitative underruns, the elimination of items contracted to local labour, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable for a financial penalty as prescribed in clause SCC 4.1.1 of section C1.2.1.2 Special Conditions of Contract. The financial penalty shall be calculated as follows:

$$P = 0,05 \times [(E - E_o)/100] \times C_A$$

where:

- E is the specified minimum percentage for local labour content
- E_o is the local labour content percentage which the Employer's Agent certifies as being achieved upon completion of the contract
- C_A is the contract amount which is the Contract Price (adjusted to exclude penalties and value added tax)
- P is the monetary value of penalty payable

The penalty shall not apply to shortfalls in the allocations to the individual target groups (i.e., Women/Youth/Disabled as per clause F1.3 above), only to shortfalls in the total local labour content achieved.

The evaluation of the Contractor's achievement of the local labour content percentage shall be undertaken monthly by the Employer's Agent, based on the accumulative achievements in comparison to the programmed utilisation of local labour, as a means of monitoring the Contractor's performance in achieving the Contract Participation Goal.

Failure by the Contractor to achieve the Contract Participation Goal target by the time of Practical Completion, shall result in the financial penalty being applied as prescribed in this clause. The Employer's Agent shall make a final determination of the Contractor's achievement of the Contract Participation Goal based on the value of the Final Payment Certificate.

E3. NATIONAL YOUTH SERVICE (NYS)

The Employer requires the implementation of National Youth Service (NYS) programmes on this project.

E3.1 The National Youth Service (NYS) programme

The National Youth Service (NYS) programme aims to train young people and provide them with practical work experience. The young people will be allocated tasks by the Contractor that will assist the Contractor with the execution of the contract.

E3.2 Applicable labour laws

The work to be undertaken on this contract by unskilled or semi-skilled workers under the National Youth Service (NYS) programme shall be implemented in accordance with the same Code of Good Practice and Ministerial Determination as described in clause F2.2 above for work to be undertaken under the Expanded

Public Works Programme (EPWP).

E3.3 Employer's project manager

The Contractor shall be required to liaise closely with the Employer's project manager who is responsible for the recruitment and training of the NYS workers.

E3.4 Persons to be employed under the NYS programme

For purposes of this contract, the Contractor shall be required to employ 60 youths aged between 18 and 35 for a period of 6 months each under the NYS programme.

The Employer's project manager shall provide the Contractor with a list of the 60 youths to be employed and the training that each of these 60 youths have received to date, and only these 60 youths shall be employed by the Contractor under the NYS programme.

E3.5 Contract of employment with persons employed under the NYS programme

The Contractor shall enter into a formal contract of employment with each youth employed under the NYS programme, using the pro forma contract of employment attached at the end of this PART E of section 3.3 Particular Specifications.

E3.6 Employment of NYS workers

The Contractor will be contractually obliged to:

- (a) employ all participants on the list provided by the Employer's project manager;
- (b) brief NYS workers on the conditions of employment;
- (c) enter into a formal contract of employment with each NYS worker, which contract will form part of the Employment Agreement;
- (d) keep personnel files for all NYS workers and make copies available to the Employer's project manager if and when requested; and
- (e) ensure that payments to NYS workers are made in accordance with Government Notice No. R347.

During the period when they are engaged in formal classroom training (other than in-service training), the youths employed under the NYS programme shall be paid the minimum wage rate as set by the Department of Labour on an annual basis in the Ministerial Determination for the Expanded Public Works Programme, and should there be an upward adjustment in the rate the Contractor will be compensated accordingly. During the period when they are engaged in productive work activities required for elements of the Works, they shall be paid in terms of the wage rates stated in clause F2.5 above.

E3.7 Training of youth workers

All NYS workers will be placed on an extensive training programme that will include:

- (a) an induction into NYS and EPWP;
- (b) life skills training;
- (c) technical training focusing on a vocational skill to be used on the project (e.g. painting or carpentry); and
- (d) entrepreneurship and business skills training.

All training will be arranged by the Employer's project manager, with whom the Contractor will be required to work closely to schedule the training sessions so that the timing of the training is aligned with the Contractor's work schedule and his demand for workers with specific skills. The Employer's project manager will make full details of the training programme available to the Contractor.

A compulsory 10-day life skills training must be provided before commencement of classroom training on NYS. This type of training must be provided by a NYDA accredited service provider as per the National Youth Service Framework from the National Department of Public Works.

The Contractor shall maintain comprehensive records of the training received by each NYS worker throughout the course of the contract, and shall submit to the Employer at each monthly site meeting a summary of the accumulated training received by each NYS worker.

The training of the NYS workers shall take place using the same training facility provided for the training of all other EPWP participants (refer to clause F5 below).

E3.8 Contractor's obligations towards persons employed under the NYS programme

Over and above implementing in accordance with Government Notice Nos. 129 and R347 the NYS programme work to be undertaken on this contract, it shall be the responsibility of the Contractor to carry out the following functions with respect to the NYS programme workers:

- (a) ensure that all participants are covered by the Compensation for Occupational Injuries and Diseases Act, 1993, for as long as they are contracted to the Contractor, and pay in full to the Compensation Commissioner such amounts as are due in terms of the Act;
- (b) pay in full to the Unemployment Insurance Fund for all participants such UIF contribution amounts as are due in terms of the Unemployment Insurance Act, 2001, as amended, and the Unemployment Insurance Contributions Act, 2002, as amended, and provide proof of such UIF payments upon request;
- (c) ensure that all participants are paid their wages on time through the pre-agreed payment method as stipulated in the participant contract;
- (d) implement health and safety procedures with respect to the participants, ensuring that the health and safety regulations are adhered to;
- (e) ensure that all participants receive induction on site safety prior to commencing with work on site;
- (f) provide all participants with the necessary protective clothing and equipment as required by law for the specific trades in which the participants are involved, in addition to the branded overalls stipulated for NYS workers;
- (g) provide safe on-site storage facilities for apparel and tools issued to the participants;
- (h) assist in the assessment of participants with regard to their competencies in their respective trades;
- (i) provide overall supervision and day-to-day management of participants; and
- (j) implement strict quality control to ensure that the work carried out by the participants is of the required standard, and, where necessary, to train and mentor the participants to assist them in achieving the standards required.

E3.9 Apparel and tools for NYS workers

The content of clause F2.8 above with regard to apparel and tools for EPWP workers shall apply equally to NYS workers, except that:

- (a) apparel and tools to be issued to NYS workers shall be determined in conjunction with the Employer's project manager;
- (b) the required branding of apparel to be issued to NYS workers shall be determined in conjunction with the Employer's project manager, and shall also include the NYS logo;
- (c) additional PPE may be required depending on the NYS worker's specific trade;
- (d) certain specified apparel and tools issued to the NYS workers will become the property of the NYS workers after the completion of their cycle of work on the project, in order to enable them to continue to practise their trade on future projects. Such apparel and tools shall be specified and authorised by the Employer's Agent; and
- (e) separate payment items have been provided in PART E of the bill of quantities to cover all costs associated with the provision of the necessary tools and apparel, including safety apparel, for the NYS workers, and the facilities for the safe storage thereof, all as authorised by the Employer's Agent.

E3.10 EPWP-NYS contract signboard

Where work takes place under the National Youth Service (NYS) programme, the NYS logo shall also be displayed on the EPWP contract signboard referred to in clause F2.9 above, indicating that this project is part of both the Expanded Public Works Programme (EPWP) and the NYS programme. Provision for the costs

related to the provision, erection and subsequent removal of the contract signboard in the pay item provided in chapter 1.3 of the bill of quantities for this purpose.

E3.11 Payment matters relating to the NYS work

No direct payment will be made to cover the Contractor's costs associated with implementing the on-site work programme for the NYS workers, for planning, organising, directing, controlling and administering their day to day activities, including the setting of daily tasks, record keeping and any on-site liaison, training and mentoring required, and for the associated job creation reporting, and such costs shall therefore be built into the rates tendered for the various items of work scheduled throughout the bill of quantities.

E4. JOB CREATION REPORTING FOR EPWP

In order to assist the Employer in complying with the goal of creating EPWP job opportunities, the Contractor must provide the information specified in clause E4.1 below for reporting purposes.

In addition, the Contractor's payment certificates shall be accompanied by the information specified in clause E4.2 below.

E4.1 Type of project data required per project

Every EPWP project shall collect and keep specific project data for the purpose of EPWP progress reporting on a monthly basis, using the EPWP Data Collection Tool template (this will be made available to the Contractor in Microsoft Excel format - refer to the pro forma spreadsheets at the end of this PART E of the Particular Specifications).

The data that is required to be kept, maintained and reported on a monthly basis for each project includes:

E4.1.1 Participant (local labour) data

A participant list of the local labour employed must be maintained for every EPWP project. The data required in this participant list is indicated below. This data shall be recorded, checked and signed off by the Contractor, and shall be submitted to the Employer at each monthly site meeting. The participant list shall contain the following data and shall be kept and maintained on site for audit purposes:

- (a) Participant identity – name, surname, initials, date of birth and identity number (or other unique identifier) plus certified copy of ID book.
- (b) Participant profiles – nationality, gender, age, education level and disability status.
- (c) Work data for participants – daily wage to be received, number of calendar days training attended and number of calendar days worked.
- (d) Records of training – as required in terms of the EPWP Data Collection Tool template.

In addition, the signed contracts of employment between the Contractor and each EPWP participant shall be kept and maintained on site for audit purposes.

E4.1.2 Project work data

The project work data generally seeks to confirm the number of people at work daily on the project. This data shall be recorded, checked and signed off by the Contractor, and shall be submitted to the Employer at each monthly site meeting. The data shall be maintained on site by the Contractor, in order that it can be provided by the Employer to the National Department of Public Works upon request when the latter is undertaking sample auditing. These records shall be kept by the Contractor for a period of three years after contract completion should they be required for audit purposes.

The data shall include:

- (a) Daily attendance register – register for each day showing all the workers that were registered as being at work on that day. Attendance registers shall be completed on site on a daily basis and signed off

by the Contractor on a weekly basis. Refer to pro forma attendance register attached at the end of this PART E of section 3.3.

- (b) Summary of monthly attendance.

E4.1.3 Project payment data

The project payment data generally seeks to confirm what was paid, for how much work and to whom. This data shall be recorded, checked and signed off by the Contractor, and shall be submitted to the Employer at each monthly site meeting.

It is required that the Contractor adopt one of the following methods as standard procedure for recording and maintaining this information:

- (a) Payment register – this is a list of the workers showing the wages paid to each worker, and signed off by each worker as proof of receipt and acceptance of payment. Information on this register must include the name of the worker, either an identity number or other unique identifier, the number of calendar days that the pay period covers, the wage rate and the total wages paid; or
- (b) Bank records showing the transfers to each worker account, signed off by the Contractor as proof of payment – these bank records must specifically show the name of the worker, either an identity number or other unique identifier, the period which the pay covers and the total wages paid.

The project payment data, as recorded and maintained by the Contractor in terms of either (a) or (b) above, must be available and applicable for the entire period for which the Employer claims an incentive reward for person-days of work created in terms of the project.

E4.1.4 Employment output data

The Contractor shall submit to the Employer at each monthly site meeting a progress report detailing production output compared to the programme of works, together with the data necessary to enable the Employer to calculate the following employment output data in accordance with the EPWP Data Collection Tool template:

- (a) Number of work opportunities created (where one work opportunity = paid work created for one individual on an EPWP project, for any period of time).
- (b) Number of person-days of work created (where one person-day = one day of work carried out by one individual). The total number of person-days of work created on a particular EPWP project shall be obtained by summing the total number of person-days worked by each individual employed during the course of that EPWP project.
- (c) Number of Full Time Equivalent (FTE) created (= total number of person-days of work created on the EPWP project divided by 230 working days). In terms of EPWP policy, one year of work created for one individual is assumed to comprise a total of 230 days of paid work carried out by that individual.
- (d) Average duration of work opportunities created (= total number of person-days of work created on the EPWP project divided by the number of work opportunities created on that EPWP project).
- (e) Average daily wage rates paid (= accumulated total of the wages paid to all individuals employed on an EPWP project divided by the total number of person-days of work created on that EPWP project).
- (f) Training information.

E4.2 Project data to be submitted with the Contractor's payment certificates

The Contractor's payment certificates shall be accompanied by labour returns providing the labour information for the corresponding period in a format specified by the Employer.

Should the Contractor choose to delay submitting payment certificates, the labour returns shall nevertheless still be submitted as per the frequency and timeframes stipulated by the Employer. The Contractor's payment certificates shall not be paid by the Employer until all pending labour information has been submitted.

The following information shall be maintained on site and submitted with each payment certificate in the format

specified by the Employer:

- (a) Copies of the signed contracts between the Contractor and any new EPWP participants (the Contractor shall note that all such formal contracts of employment entered into with persons employed under the Expanded Public Works Programme (EPWP) shall expire on 31 March each year, and the Contractor shall therefore be required to enter into new contracts with such persons as of 1 April each year, and shall be required to submit copies of all such new contracts with the first payment certificate thereafter);
- (b) Certified ID copies of all local labour employed as EPWP participants;
- (c) Attendance registers for the EPWP participants;
- (d) Proof of payment of EPWP participants; and
- (e) Information as required in terms of the EPWP Data Collection Tool template.

E5. PROVISION OF STRUCTURED TRAINING

E5.1 Scope of structured training

In order to avoid duplication of training facilities, the training described in Part F: Small Contractor Development (in those instances where Part F is included in the contract), shall be provided utilising the training facility measured and paid for in accordance with the requirements of this PART E: Expanded Public Works Programme (EPWP).

The Employer's objectives include the training of local labour and Targeted Enterprises within a structured programme, in order to equip them with skills that will assist them in gaining future employment, and to facilitate targeted EPWP participants in gaining competencies and unit standard credits towards future full learnership qualifications.

Such training shall contain both theoretical and practical components and shall be conducted in accordance with the various laws and regulations contained in the South African Qualifications Authority (SAQA) statutes.

The following aspects of the structured training to be provided are noted:

- (a) The Employer has no service agreement or memorandum of understanding with any Education and Training Quality Assurance (ETQA) body, and therefore does not function as the employer as defined under any three-party learnership agreement between the learner, the training provider and the employer.
- (b) The structured training programmes implemented on this contract, although comprising several unit standards, are unlikely to total to sufficient credits for a full learnership qualification. Nevertheless, the competencies and credits achieved should contribute to a full learnership through the later acquisition by the learner of the remaining unit standards required for the full learnership.

The Contractor shall be required to provide a training facility on the Site, or in close proximity thereto, and to provide over the duration of the contract the following structured training for EPWP participants:

- (a) Generic skills training;
- (b) Entrepreneurial skills training;
- (c) Construction skills training; and
- (d) In-service training.

Generic skills training and in-service training shall be provided to all EPWP participants.

Entrepreneurial and construction skills training shall be provided to targeted EPWP participants only.

E5.2 Training provider and trainers

The Contractor shall be required to procure the services of a training provider accredited by the Construction Education and Training Authority (CETA).

The training provider shall have in its employ trainers who are registered as assessors with the Construction Education and Training Authority (CETA), and who shall deliver the training.

Proof of the accreditation of the service provider and the registration of the trainers by the CETA shall be submitted to the Employer's Agent. Such accreditation and registration shall be current and valid, and the proof submitted shall include the NQF levels and unit standards for which each trainer is accredited.

E5.3 Skills analysis and selection of targeted EPWP participants

Studying for any learnership requires minimum literacy and numeracy competencies as defined by SAQA. The actual literacy and numeracy levels of the persons employed on the Site shall provide a basis to guide the Contractor and the training provider on how to conduct the selection process.

The Contractor shall therefore conduct a skills analysis of the local labour and Targeted Enterprises employed, in order to determine the formal education qualifications of each employee.

The Contractor, in conjunction with the training provider, shall then identify those persons that display the potential to benefit from such structured entrepreneurial and construction skills training as may be provided for in the contract, and shall make recommendations in this regard to the Employer's Agent.

The final candidates selected for such training shall be decided between the Contractor and the Employer's Agent (or by the Project Management Team (PMT) in the case of training for Targeted Enterprises in terms of PART F: Small Contractor Development, where applicable).

E5.4 Structured training programmes

The Contractor, supported by the training provider, shall plan then implement structured training programmes for generic, entrepreneurial and construction skills training.

Training courses shall commence within three months of the Contractor taking possession of the Site, and shall be completed before the Due Completion Date.

All training shall take place within normal working hours, or as otherwise agreed with the learners.

The training provider shall design, compile and deliver the structured training programmes, based on the information obtained from the skills analysis.

E5.4.1 Generic skills training

The structured training programmes designed by the training provider for the generic skills training shall comprise relevant general courses such as basic hygiene and HIV/AIDS awareness, first aid, road safety, managing personal finance, and other courses that would be useful to workers in the road construction industry or as life skills generally.

E5.4.2 Entrepreneurial skills training

The structured training programmes designed by the training provider for the entrepreneurial skills training shall comprise unit standards that contribute towards one or more of the following full learnership qualifications, as appropriate taking into consideration the skills analysis information for the selected candidates (details of the learnership qualifications and the applicable unit standards may be found on the website www.saqa.org.za):

ENTREPRENEURIAL SKILLS TRAINING				
Qualification title	SAQA qualification ID	NQF level	Minimum credits	Purpose of qualification
National Certificate: Supervision of Construction Processes	49053	Level 4	176	Learners found competent against this qualification will be able to execute the supervision of construction processes, with specialisation in a specific context

E5.4.3 Construction skills training

The structured training programmes designed by the training provider for the construction skills training shall comprise unit standards that contribute towards one or more of the following full learnership qualifications, as appropriate taking into consideration the skills analysis information for the selected candidates (details of the learnership qualifications and the applicable unit standards may be found on the website www.saq.org.za):

CONSTRUCTION SKILLS TRAINING				
Qualification title	SAQA qualification ID	NQF level	Minimum credits	Purpose of qualification
National Certificate: Supervision of Construction Processes	49053	Level 4	176	Learners found competent against this qualification will be able to execute the supervision of construction processes, with specialisation in a specific context
National Certificate: Construction: Roadworks	24173	Level 3	155	This qualification is for persons who work or intend to work within a construction context on a site, and who seek recognition for essential skills in construction operations in roadworks.
National Certificate: Construction: Roadworks	24133	Level 2	120	This qualification is for persons who work or intend to work within a construction context on a site, and who seek recognition for essential skills in construction operations in roadworks.
National Certificate: Occupational Health, Safety and Environment	74269	Level 2	120	This qualification is to equip learners working in any type of workplace with a broad understanding and knowledge of Occupational Health, Safety and Environmental (HSE) concepts and practices with sufficient detail to enable them to function in a safe and healthy way and to deal with health and safety problems and issues.

E5.4.4 Training programme

The Contractor's proposed training programmes shall be subject to the approval of the Employer's Agent (or the approval of the Project Management Team (PMT) in the case of training for Targeted Enterprises in terms of PART F: Small Contractor Development, where applicable), and the Contractor shall, if so instructed by the Employer's Agent or the PMT, alter or amend the programmes and the course content to meet any additional needs identified.

The Contractor shall be responsible for everything necessary for the delivery of the training programmes, including:

- (a) the provision of the trainers;
- (b) the provision of a suitable secure venue, complete with adequate furniture, lighting, air conditioning, power and ablution facilities;
- (c) the provision of all necessary stationery, consumables and study materials;
- (d) the transportation of the learners to and from the training facility;
- (e) the payment of wages to all learners during the classroom training at a rate equal to the minimum wage rate as set on an annual basis in the Ministerial Determination for the Expanded Public Works Programme;
- (f) the provision of any relevant Personal Protective Equipment (PPE) required for the training; and
- (g) additional supervision of the learners during the practical learning stage of the training carried out by constructing relevant elements of the Works (wages for the learners during this stage of the training will be paid through the rates tendered for the relevant scheduled work items for those elements).

At the successful completion of each course, the Contractor's training provider shall, as proof of attendance and completion, issue each learner with a certificate indicating the course content.

The training provider shall also ensure that each unit standard contributing towards a full learnership qualification and successfully completed by the learner is entered onto the national database.

The Contractor shall keep comprehensive records of the training given to each learner and the certificates issued, and shall provide copies of such records to the Employer's Agent when required.

The Contractor shall also complete and submit to the Employer's Agent each month, in a format acceptable to the Employer (using the EPWP Data Collection Tool template), a return detailing the training provided, both for the month and cumulatively for the contract.

E5.5 In-service training

The Contractor shall, from the commencement of the contract, implement an in-service training programme in which the various skills required for the execution and completion of the Works are imparted to the EPWP participants engaged thereon.

Throughout the duration of the contract, the EPWP participants shall be trained progressively through the various stages of each particular type of work in which they are engaged, and their work shall be supervised and monitored and their methods corrected where necessary.

The in-service training programme shall be submitted with the initial Works programme. The Contractor shall record the progress in relation to this programme on a monthly basis, and this progress report shall be incorporated in the monthly site meeting minutes and the payment certificate.

The Contractor shall provide sufficient skilled and competent trainers to train all EPWP participants engaged on the contract in the various skills required to enable them to carry out the required construction activities.

The in-service training of EPWP participants shall take place before commencement of the relevant construction activity, and the Contractor shall take into account in his programme the lead time required for such training. All in-service training shall be deemed to be an element of the relevant construction activity.

All formal in-service training shall be documented in terms of the EPWP Data Collection Tool template, and shall be accompanied by an attendance register of the EPWP participants on the applicable days.

All EPWP participants shall be remunerated at their agreed wage rate in respect of the time spent undergoing in-service training. The cost of the Contractor's in-service training obligations shall be deemed to be covered by the sums and rates tendered for items B13.01(a), (b) and (c) in the bill of quantities.

On termination of their employment, the Contractor shall provide each EPWP participant engaged on the contract with a certificate of service on which the following information shall be recorded:

- (i) name of the Contractor;
- (ii) name of the project / contract;
- (iii) name of the employee;
- (iv) nature of the work satisfactorily executed by the EPWP participant and the time spent thereon;
- (v) nature and extent of training provided to the EPWP participant; and
- (vi) dates of service.

E5.6 Training venue facility

The training venue facility to be provided by the Contractor shall be constructed, furnished and fully serviced for the duration of the contract in accordance with Chapter 1.4 of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

In order to minimise the cost of transporting the learners for training, the facility shall be located in secure premises on the Site, or in close proximity thereto.

This facility shall be used to deliver all training, irrespective of whether it is delivered in terms of Part E or Part F of the Particular Specifications.

The facility shall accommodate a class of up to 30 learners and shall comprise the following:

(a)	Lecture room (interior area)	=	50 m ²
(b)	Ablutions (male)	=	6 m ²
(c)	Ablutions (female)	=	6 m ²
(d)	Chairs for learners (individual chairs, with backs)	=	30 off
(e)	Desk area for 25 learners (500 mm width)	=	12,5 m ²
(f)	Chairs for trainers and management (individual chairs, with backs)	=	5 off
(g)	Table area for trainers and management	=	3 m ²
(h)	220/250 volt power points	=	6 off
(i)	Double 80 watt fluorescent light fittings complete with ballast and tubes	=	6 off
(j)	Single incandescent light fittings complete with 100 watt globes	=	4 off
(k)	Wash hand basins complete with taps and drains	=	4 off
(l)	Fire extinguishers, 9,0 kg, all-purpose dry powder type, complete, mounted on wall with brackets	=	2 off
(m)	Air conditioning units with 2,2 kW minimum capacity, mounted and with own power connection	=	4 off
(n)	Voltage stabilizers	=	2 off
(o)	Floodlights complete with poles and 500 watt minimum globes and controlled by photocells	=	2 off
(p)	White boards (3 m x 1,5 m)	=	1 off
(q)	Venetian blinds	=	12 m ²

E6. MEASUREMENT AND PAYMENT

Item	Unit
E6.01 Provision of the training venue facility, including the cost of transporting the learners to and from this facility	lump sum (Sum)

The tendered lump sum for subitem E6.01 shall include full compensation for the provision of the training

venue facility complete and serviced as specified, including for the provision of power, water, sewerage and cleaning services for the duration of the contract, for lighting, power points and voltage stabilizers, for air conditioning, blinds, fire extinguishers, floodlights, furniture and whiteboards, for the provision of security at the facility, for all other costs necessary to maintain the facility for the duration of the contract, and for the removal of the facility on completion of the contract.

The tendered lump sum shall also include full compensation for transporting the learners on each day of training from their place of work to this training venue facility, and back again after the training for the day has been delivered by the accredited trainers.

Payment of the lump sum shall be made in three instalments as follows:

The first instalment, 50% of the lump sum, shall be paid after the Contractor has met all his obligations regarding the provision of the training venue facility, complete and serviced as specified, and the facility has been successfully commissioned for use.

The second instalment, 35% of the lump sum, shall be paid when 75% of the training courses proposed in accordance with the Contractor's approved structured training programme have been delivered to the learners by the accredited trainers.

The third and final instalment, 15% of the lump sum, shall be paid when all training has been concluded and the facility has been dismantled and removed from the site.

Item	Unit
E6.02 Training of learners employed by the contractor or by the Targeted Enterprise subcontractors:	
(a) Generic skills:	
(i) Training costs.....	provisional sum (Prov sum)
(ii) Handling costs and profit in respect of subitem E6.02(a)(i)	percentage (%)
(b) Entrepreneurial skills:	
(i) Training costs.....	provisional sum (Prov sum)
(ii) Handling costs and profit in respect of subitem E6.02(b)(i)	percentage (%)
(c) Construction skills:	
(i) Training costs.....	provisional sum (Prov sum)
(ii) Handling costs and profit in respect of subitem E6.02(c)(i)	percentage (%)
(d) Transportation and accommodation costs of selected learners only, while receiving off-site training:	
(i) Transportation and accommodation costs	provisional sum (Prov sum)
(ii) Handling costs and profit in respect of subitem E6.02(d)(i)	percentage (%)

Expenditure under subitems E6.02(a)(i), (b)(i), (c)(i) and (d)(i) shall be in accordance with clause 6.6 of the General Conditions of Contract 2015.

The provisional sum for each of subitems E6.02(a)(i), (b)(i) and (c)(i) is provided to cover the total costs of the required training in generic, entrepreneurial and construction skills respectively, including for the procurement of the services of the accredited trainers and their delivery of the training courses to the learners, the provision of all training materials including all stationery and study materials, the wages of the learners for the duration

of the courses including the associated COIDA and UIF payments, and the provision of any tools and PPE that may be required during those courses incorporating practical training modules. The payment of wages to learners in terms of subitems E6.02(a)(i), (b)(i) and (c)(i) will only be made to those learners who attend and successfully complete each course of the approved training programme. Payment shall not be made to learners who, once selected, do not attend or only partially complete structured training courses.

The tendered percentage for each of subitems E6.02(a)(ii), (b)(ii) and (c)(ii) is the percentage of the amount actually spent under each of subitems E6.02(a)(i), (b)(i) and (c)(i) respectively, and shall include full compensation for the handling costs of the Contractor and the profit in connection with the provision of the training in generic, entrepreneurial and construction skills respectively, including for the costs of record keeping and reporting with respect to the training received by each learner.

The provisional sum for subitem E6.02(d)(i) is provided to cover all costs related to the transportation and accommodation costs of selected learners only, while receiving off-site training, where such learners have been specifically selected to receive such off-site training and where such training cannot be delivered using the training venue facility provided by the Contractor in terms of subitem E6.01.

The tendered percentage for subitem E6.02(d)(ii) is the percentage of the amount actually spent under subitem E6.02(d)(i), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the transportation and accommodation costs of selected learners only, while receiving off-site training.

Item	Unit
E6.03 Payments associated with the NYS programme:	
(a) Employment of NYS workers	provisional sum (Prov sum)
(b) Provision of tools and apparel for the NYS workers	provisional sum (Prov sum)
(c) Handling costs and profit in respect of subitems E6.03(a) and (b)	percentage (%)
(d) Training of NYS workers:	
(i) Provision of training for NYS workers	provisional sum (Prov sum)
(ii) Handling costs and profit in respect of subitem E6.03(d)(i)	percentage (%)
(e) Liaison with the Employer's project manager and the training service provider:	
(i) Liaison conducted by the Construction Manager.....	hour (h)
(ii) Liaison conducted by the senior site foreman.....	hour (h)

The provisional sums provided under subitems E6.03(a) and (b) shall be expended in accordance with clause 6.6 of the General Conditions of Contract 2015.

The provisional sum under subitem E6.03(a) shall be used to cover the cost of employment payments made by the Contractor to the NYS workers, including the associated COIDA and UIF payments, all as authorised by the Employer's Agent.

The provisional sum under subitem E6.03(b) shall be used to cover all costs associated with the provision of the necessary tools and apparel, including safety apparel, for the NYS workers, and the facilities for the safe storage thereof, all as authorised by the Employer's Agent.

The tendered percentage under subitem E6.03(c) is a percentage of the total amount of expenditure approved by the Employer's Agent under the provisional sum subitems E6.03(a) and (b), and shall include full compensation for attendance by the Contractor, for the handling costs of the Contractor, and for the profit in connection with payments made by the Contractor with respect to the NYS programme implementation.

The provisional sum provided under subitem E6.03(d)(i) shall be expended in accordance with clause 6.6 of the General Conditions of Contract 2015.

The provisional sum under subitem E6.03(d)(i) shall be used to cover all costs associated with the provision of training for the NYS workers, including the cost of procuring the services of the accredited trainers and their delivery of the training courses to the NYS workers, and the provision of all training materials including all stationery and study materials.

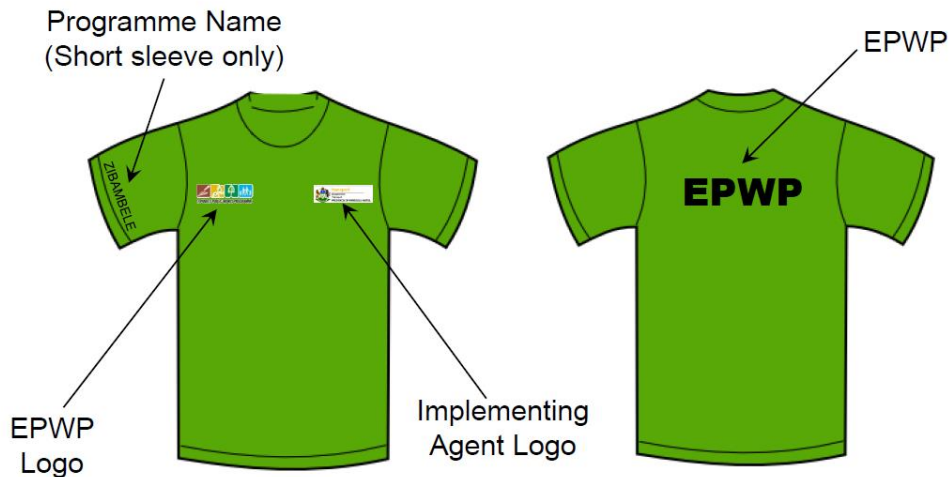
The tendered percentage under subitem E6.03(d)(ii) is a percentage of the total amount of expenditure approved by the Employer's Agent under the provisional sum subitem E6.03(d)(i), and shall include full compensation for attendance by the Contractor, for the handling costs of the Contractor, and for the profit in connection with payments made by the Contractor with respect to the provision of training for the NYS workers, including for the costs of record keeping and reporting with respect to the training received by each NYS worker.

The unit of measurement for subitems E6.03(e)(i) and (ii) shall be the hour. The tendered rates shall include full compensation for all costs related to the Construction Manager and the senior site foreman respectively for time spent at formal liaison meetings authorised and convened by the Employer's Agent for the specific purpose of liaising with the Employer's project manager and / or the training service provider. The payment shall be made only for the time spent in the formal meeting itself. No payment shall be made for time spent during any other on-site liaison, telephonic liaison, e-mail or written correspondence liaison between these parties, or for liaison conducted with the Employer's project manager and / or the training service provider by any other member of the Contractor's site staff or head office personnel, the cost of all of which shall be deemed to be included in the Contractor's time-related obligations under subitem C1.3.1.3

Expanded Public Works Programme: PPE BRANDING For EPWP Projects



T-Shirt/Overall/Safety Vest Branding



Logo Options

Implementing Agent Examples

National Projects

Provincial Department Projects

Municipal Projects

PLEASE VERIFY WHICH LOGO NEEDS TO USED

EPWP LOGO

The Logo shall not be disproportionately stretched. A monochrome black logo may be used on approval only.

The above logo is the current logo. Logos with green text below the words EXPANDED PUBLIC WORKS PROGRAMME are old logos and should not be utilised.

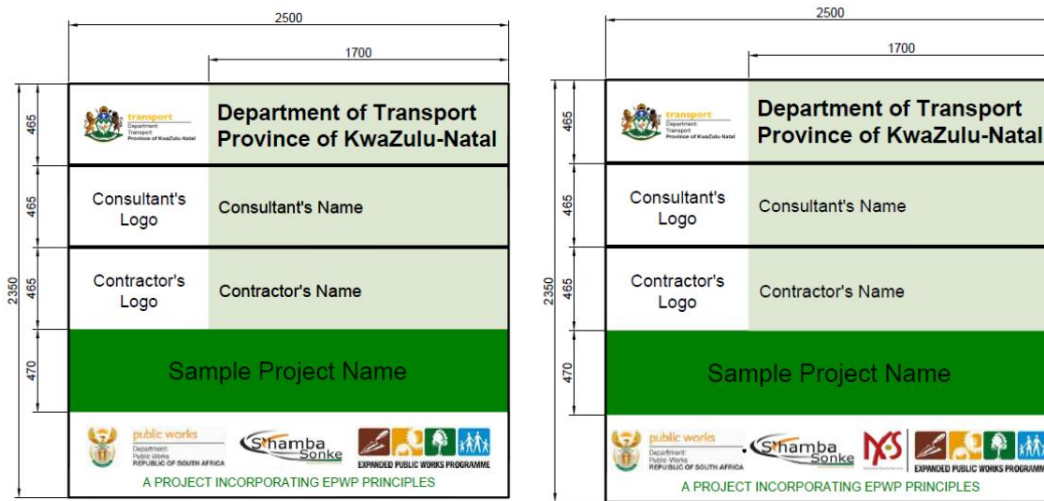
Printing on PPE

PPE (Overalls) shall be Pantone Green with/without reflective tape and shall be branded as follows:

- Implementer's Logo (printed or embroidered) on the left front pocket location ie over the heart position. (full colour)
- EPWP logo on the right front pocket (printed or embroidered) location (full colour)
- The letters EPWP on the back of the PPE in BLACK
- The program name eg Vuk'uphile is to be printed on the right sleeve of short sleeved apparel and need not be placed on long sleeved apparel.
- Where required, lime green safety vests are to be branded with similar specification above. In this instance the Overalls may not necessarily be branded provided that the use of high visibility vests is mandatory.
- All artwork and PPE samples shall be approved and signed off by the consultant prior to printing/embroidering.



Project Signboard



For further information contact:

Petronella Sithebe

Petronella.Sithebe@Kzntransport.gov.za

033-355-8023



PRO FORMA EPWP CONTRACT OF EMPLOYMENT

Contractor's
Logo



EXPANDED PUBLIC WORKS PROGRAMME

This contract must be read in conjunction with the standard terms and conditions of employment on EPWP attached herein.

EPWP CONTRACT OF EMPLOYMENT between

Employer Details

Name	Click or tap here to enter text.	Address	Click or tap here to enter text.
Telephone	Click or tap here to enter text.		
Email	Click or tap here to enter text.		
Contact	Click or tap here to enter text.		

And

Employee Details

Name	Click or tap here to enter text.	Surname	Click or tap here to enter text.
ID:	Click or tap here to enter text.	Cell	Click or tap here to enter text.
Sex (M/F)	Male <input type="checkbox"/> Female <input type="checkbox"/>	Disability	Yes <input type="checkbox"/> No <input type="checkbox"/>
Primary Language	Click or tap here to enter text.	Physical Address	Click or tap here to enter text.
Other Languages	Click or tap here to enter text.		
Highest Education Level Achieved	Click or tap here to enter text.	Local Municipality	Click or tap here to enter text.
Other qualifications	Click or tap here to enter text.	Ward	Click or tap here to enter text.
Grant Received (Y/N)	Yes <input type="checkbox"/> No <input type="checkbox"/>	Grant type:	

Employment Details

Name of project:	Click or tap here to enter text.		
Job Title:	Click or tap here to enter text.		
Duties:	Click or tap here to enter text.		
Contract Start Date	Click or tap here to enter text.	Contract Finish Date	Click or tap here to enter text.
The wage per task/day is:	R Click or tap here to enter text. / Hour/Day/task (Specifier to select correct rate)		

Special Conditions

<p>You must be aware that this employment contract is a limited term contract and not a permanent job. This employment contract may be terminated for any one of the following reasons:</p> <ul style="list-style-type: none"> a) The contractor does not get additional contracts from the EPWP. b) Funding for the programme in your area comes to an end. c) Underperformance: first offence – final written warning. Second offence – dismissal. 	<p>Payment</p> <ul style="list-style-type: none"> a) You will be paid a fixed amount stipulated above for completing a fixed amount of work. b) The amount of work required for the agreed rate of pay will vary from task to task. You will be informed at the beginning of each task or group of tasks how much work you are expected to complete per day. c) You will only be paid for work completed. d) Payment during classroom training shall be R /day
<p>Personal Protective Clothing will be supplied to the employee by the employer depending on the work to be performed, and will remain the property of the employee provided that the employee has worked for at least 3 months.</p>	

Acceptance

Employer Name:	Employer Signature:	Employee Name:	Employee Signature:
Witness 1 Name:	Witness 1 Signature:	Witness 2 Name:	Witness 2 Signature:

APPENDIX E – Conditions of Service

1. Introduction

1.1. This document contains the standard terms and conditions for workers employed in elementary occupations on an Expanded public Works Programme (EPWP). These terms and conditions do NOT apply to persons employed in the supervision and management of an EPWP.

1.2. In this document –

- a) “department” means any department of the State, implementing agent or contractor;
- b) “employer” means any department, implementing agency or contractor that hires workers to work in elementary occupations on an EPWP;
- c) “worker” means any person working in an elementary occupation on an EPWP;
- d) “elementary occupation” means any occupation involving unskilled or semi-skilled work;
- e) “management” means any person employed by a department or implementing agency to administer or execute an EPWP;
- f) “task” means a fixed quantity of work;
- g) “task-based work” means work in which a worker is paid a fixed rate for performing a task;
- h) “task-rated worker” means a worker paid on the basis of the number of tasks completed;
- i) “time-rated worker” means a worker paid on the basis of the length of time worked.

2. Terms of Work

- 2.1. Workers on an EPWP are employed on a temporary basis.
- 2.2. A worker may NOT be employed for longer than 24 months in any five-year cycle on an EPWP.
- 2.3. Employment on an EPWP does not qualify as employment as a contributor for the purposes of the Unemployment Insurance Act 30 of 1966.

3. Normal Hours of Work

- 3.1. An employer may not set tasks or hours of work that require a worker to work–
 - a) more than forty hours in any week
 - i. on more than five days in any week; and
 - ii. for more than eight hours on any day.
- 3.2. An employer and worker may agree that a worker will work four days per week. The worker may then work up to ten hours per day.
- 3.3. A task-rated worker may not work more than a total of 55 hours in any week to complete the tasks allocated (based on a 40-hour week) to that worker.

4. Meal Breaks

- 4.1. A worker may not work for more than five hours without taking a meal break of at least thirty minutes duration.
- 4.2. An employer and worker may agree on longer meal breaks.
- 4.3. A worker may not work during a meal break. However, an employer may require a worker to perform duties during a meal break if those duties cannot be left unattended and cannot be performed by another worker. An employer must take reasonable steps to ensure that a worker is relieved of his or her duties during the meal break.
- 4.4. A worker is not entitled to payment for the period of a meal break. However, a worker who is paid on the basis of time worked must be paid if the worker is required to work or to be available for work during the meal break.

5. Special Conditions for Security Guards

- 5.1. A security guard may work up to 55 hours per week and up to eleven hours per day.
- 5.2. A security guard who works more than ten hours per day must have a meal break of at least one hour or two breaks of at least 30 minutes each.

6. Daily Rest Period

Every worker is entitled to a daily rest period of at least eight consecutive hours. The daily rest period is measured from the time the worker ends work on one day until the time the worker starts work on the next day.

7. Weekly Rest Period

Every worker must have two days off every week. A worker may only work on their day off to perform work which must be done without delay and cannot be performed by workers during their ordinary hours of work (“emergency work”).

8. Work on Sundays and Public Holidays

- 8.1. A worker may only work on a Sunday or public holiday to perform emergency or security work.
- 8.2. Work on Sundays is paid at the ordinary rate of pay.
- 8.3. A task-rated worker who works on a public holiday must be paid –
 - a) the worker’s daily task rate, if the worker works for less than four hours;
 - b) double the worker’s daily task rate, if the worker works for more than four hours.
- 8.4. A time-rated worker who works on a public holiday must be paid –
 - a) the worker’s daily rate of pay, if the worker works for less than four hours on the public holiday;
 - b) double the worker’s daily rate of pay, if the worker works for more than four hours on the public holiday.

9. Sick Leave

- 9.1. Only workers who work four or more days per week have the right to claim sick-pay in terms of this clause.
- 9.2. A worker who is unable to work on account of illness or injury is entitled to claim one day’s paid sick leave for every full month that the worker has worked in terms of a contract.
- 9.3. A worker may accumulate a maximum of twelve days’ sick leave in a year.
- 9.4. Accumulated sick-leave may not be transferred from one contract to another contract.
- 9.5. An employer must pay a task-rated worker the worker’s daily task rate for a day’s sick leave.
- 9.6. An employer must pay a time-rated worker the worker’s daily rate of pay for a day’s sick leave.
- 9.7. An employer must pay a worker sick pay on the worker’s usual payday.
- 9.8. Before paying sick-pay, an employer may require a worker to produce a certificate stating that the worker was unable to work on account of sickness or injury if the worker is –
 - a) absent from work for more than two consecutive days; or
 - b) absent from work on more than two occasions in any eight-week period.
- 9.9. A medical certificate must be issued and signed by a medical practitioner, a qualified nurse or a clinic staff member authorised to issue medical certificates indicating the duration and reason for incapacity.
- 9.10. A worker is not entitled to paid sick-leave for a work-related injury or occupational disease for which the worker can claim compensation under the Compensation for Occupational Injuries and Diseases Act.

Employer	Employee
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10. Maternity Leave

- 10.1. A worker may take up to four consecutive months' unpaid maternity leave.
- 10.2. A worker is not entitled to any payment or employment-related benefits during maternity leave.
- 10.3. A worker must give her employer reasonable notice of when she will start maternity leave and when she will return to work.
- 10.4. A worker is not required to take the full period of maternity leave. However, a worker may not work for four weeks before the expected date of birth of her child or for six weeks after the birth of her child, unless a medical practitioner, midwife or qualified nurse certifies that she is fit to do so.
- 10.5. A worker may begin maternity leave –
 - a) four weeks before the expected date of birth; or
 - b) on an earlier date –
 - i. if a medical practitioner, midwife or certified nurse certifies that it is necessary for the health of the worker or that of her unborn child; or
 - ii. if agreed to between employer and worker; or
 - iii. on a later date, if a medical practitioner, midwife or certified nurse has certified that the worker is able to continue to work without endangering her health.
- 10.6. A worker who has a miscarriage during the third trimester of pregnancy or bears a stillborn child may take maternity leave for up to six weeks after the miscarriage or stillbirth.
- 10.7. A worker who returns to work after maternity leave, has the right to start a new cycle of twenty-four months employment, unless the EPWP on which she was employed has ended.

11. Family responsibility leave

- 11.1. Workers, who work for at least four days per week, are entitled to three days paid family responsibility leave each year in the following circumstances -
 - a) when the employee's child is born;
 - b) when the employee's child is sick;
 - c) in the event of a death of –
 - i. the employee's spouse or life partner;
 - ii. the employee's parent, adoptive parent, grandparent, child, adopted child, grandchild or sibling.

12. Statement of Conditions

- 12.1. An employer must give a worker a statement containing the following details at the start of employment –
 - a) the employer's name and address and the name of the EPWP;
 - b) the tasks or job that the worker is to perform; and
 - c) the period for which the worker is hired or, if this is not certain, the expected duration of the contract;
 - d) the worker's rate of pay and how this is to be calculated;
 - e) the training that the worker will receive during the EPWP.
- 12.2. An employer must ensure that these terms are explained in a suitable language to any employee who is unable to read the statement.
- 12.3. An employer must supply each worker with a copy of these conditions of employment.

13. Keeping Records

- 13.1. Every employer must keep a written record of at least the following –
 - a) the worker's name and position;
 - b) in the case of a task-rated worker, the number of tasks completed by the worker;
 - c) in the case of a time-rated worker, the time worked by the worker;
 - d) payments made to each worker.
- 13.2. The employer must keep this record for a period of at least three years after the completion of the EPWP.

14. Payment

- 14.1. An employer must pay all wages at least monthly in cash or by cheque or into a bank account.
- 14.2. A task-rated worker will only be paid for tasks that have been completed.
- 14.3. An employer must pay a task-rated worker within five weeks of the work being completed and the work having been approved by the manager or the contractor having submitted an invoice to the employer.
- 14.4. A time-rated worker will be paid at the end of each month.
- 14.5. Payment must be made in cash, by cheque or by direct deposit into a bank account designated by the worker.
- 14.6. Payment in cash or by cheque must take place –
 - a) at the workplace or at a place agreed to by the worker;
 - b) during the worker's working hours or within fifteen minutes of the start or finish of work;
 - c) in a sealed envelope which becomes the property of the worker.
- 14.7. An employer must give a worker the following information in writing –
 - a) the period for which payment is made;
 - b) the numbers of tasks completed or hours worked;
 - c) the worker's earnings;
 - d) any money deducted from the payment;
 - e) the actual amount paid to the worker.
- 14.8. If the worker is paid in cash or by cheque, this information must be recorded on the envelope and the worker must acknowledge receipt of payment by signing for it
- 14.9. If a worker's employment is terminated, the employer must pay all monies owing to that worker within one month of the termination of employment.

15. Deductions

- 15.1. An employer may not deduct money from a worker's payment unless the deduction is required in terms of a law.
- 15.2. An employer must deduct and pay to the SA Revenue Services any income tax that the worker is required to pay.
- 15.3. An employer who deducts money from a worker's pay for payment to another person must pay the money to that person within the time period and other requirements specified in the agreement law, court order or arbitration award concerned.
- 15.4. An employer may not require or allow a worker to –
 - a) repay any payment except an overpayment previously made by the employer by mistake;
 - b) state that the worker received a greater amount of money than the employer actually paid to the worker; or
 - c) pay the employer or any other person for having been employed.

16. Health and Safety

- 16.1. Employers must take all reasonable steps to ensure that the working environment is healthy and safe.
- 16.2. A worker must –
 - a) work in a way that does not endanger his/her health and safety or that of any other person;
 - b) obey any health and safety instruction;
 - c) obey all health and safety rules of the EPWP;
 - d) use any personal protective equipment or clothing issued by the employer;
 - e) report any accident, near-miss incident or dangerous behaviour by another person to their employer or manager.

17. Compensation for Injuries and Diseases

Employer	Employee
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- 17.1. It is the responsibility of the employers (other than a contractor) to arrange for all persons employed on an EPWP to be covered in terms of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993.
- 17.2. A worker must report any work-related injury or occupational disease to their employer or manager.
- 17.3. The employer must report the accident or disease to the Compensation Commissioner.
- 17.4. An employer must pay a worker who is unable to work because of an injury caused by an accident at work 75% of their earnings for up to three months. The employer will be refunded this amount by the Compensation Commissioner. This does NOT apply to injuries caused by accidents outside the workplace such as road accidents or accidents at home.

18. Termination

- 18.1. The employer may terminate the employment of a worker for good cause after following a fair procedure.
- 18.2. A worker will not receive severance pay on termination.
- 18.3. A worker is not required to give notice to terminate employment. However, a worker who wishes to resign should advise the employer in advance to allow the employer to find a replacement.
- 18.4. A worker who is absent for more than three consecutive days without informing the employer of an intention to return to work will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.
- 18.5. A worker who does not attend required training events, without good reason, will have terminated the contract. However, the worker may be re-engaged if a position becomes available for the balance of the 24-month period.

19. Certificate of Service

- 19.1. On termination of employment, a worker is entitled to a certificate stating –
 - a) the worker's full name;
 - b) the name and address of the employer;
 - c) the EPWP on which the worker worked;
 - d) the work performed by the worker;
 - e) any training received by the worker as part of the EPWP;
 - f) the period for which the worker worked on the EPWP;
 - g) any other information agreed on by the employer and worker.Either party can terminate this agreement with four weeks written notice. In the case where an employee is illiterate notice may be given by that employee verbally.

Employer	Employee
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**EPWP DATA COLLECTION TOOL TEMPLATE
(PRO FORMAS OF MICROSOFT EXCEL SPREADSHEETS)**

EPWP REGISTRATION FORM		
Field requested	Description if needed	Please complete the sections in white
Project Details		
Profile ID	<i>Generated by the system</i>	
Project Name	<i>The name of the project</i>	
Project Reference Number	<i>Contract number</i>	
Project description	<i>Full description of what is happening in the project (as per the appointment letter) and the community benefiting from the project</i>	
Duration		
Project Start Date	<i>Planned Start date of the particular contract</i>	
Project End Date	<i>Planned End date of the particular contract</i>	
Estimated Budget	<i>Overall Contract budget (excluding professional fees) for Current Financial Year</i>	
Project Location		
Province	<i>In which province is the project implemented?</i>	KZN
District Municipality	<i>Under which District Municipality does this project falls?</i>	
Local Municipality	<i>Under which Local Municipality does this project falls?</i>	
Latitude (in decimal format)	<i>Is generated by the system</i>	
Longitude (in decimal format)	<i>Is generated by the system</i>	
Project Location per site		
Locality name	<i>Where exactly is the project implemented? (Ward name)</i>	
Subplace	<i>Town / Village</i>	
Ward	<i>The project site is located in which ward?</i>	
Government facility	<i>Landmark near the project (Post office/school/clinic/library)</i>	
Spatial Data Type	<i>Geopoint (structure)/ Line (road)/ Polygon(area)</i>	
Site physical address	<i>Physical address of the site office</i>	
Public Body Details		
Public body sphere	<i>In which sphere is the project implemented? (National, Provincial or Municipal)</i>	Provincial
Reporting public body that is the project owner (and will report on the project)	<i>Which Institution or Department that owns / approved this project (Education, Health, City of Tshwane Metro etc.)</i>	KZN Department of Transport
Department in the Public body that is responsible for the project	<i>Which department /unit is responsible for this project? (e.g. Roads & storm water, Education, Community safety etc.)</i>	KZN Department of Transport
Implementing public body type	<i>In which sphere is this project implemented? (Metro, Distr, Mun, National or Provincial Dept.)</i>	Provincial
Public body that will implement the project	<i>Which institution that implements the project?</i>	KZN Department of Transport
Project Implementation		
Is this the project on the municipal IDP	<i>Yes / No</i>	N/A
IDP reference number allocated to the project	<i>The number reflected in your Municipal IDP document</i>	N/A
EPWP Details		
EPWP Sector	<i>The project is implemented in which sector? (Infrastructure, Environment & culture, Non-state or Social)</i>	Infrastructure
EPWP Programme	<i>The project is implemented under which programme?</i>	
EPWP Sub Programme	<i>The project is implemented under which sub-programme?</i>	

EPWP BUSINESS FORM		
Field requested	Description if needed	Please complete the sections in white
Project Details		
Profile ID	<i>Generated by the system</i>	
Project Name	<i>The name of the project</i>	
Project Reference Number	<i>Contract number</i>	
Project description	<i>Full description of what is happening in the project (as per the appointment letter) and the community benefiting from the project</i>	
Duration		
Project Start Date		
Project End Date		
Estimated Budget	<i>Project Budget</i>	
Project Location		
Province		KZN
District Municipality	<i>Under which District Municipality does this projects falls</i>	
Local Municipality	<i>Under which Local Municipality does this projects falls</i>	
Latitude (in decimal format)	<i>GPS coordinates</i>	
Longitude (in decimal format)		
Public Body Details		
Public body sphere	<i>Such as Municipal or Provincial</i>	Provincial
Reporting public body that is the project owner (and will report on the project)	<i>Which Department approved the project in (education, Health etc.)</i>	KZN Department of Transport
Department / Unit in the Public body that is responsible for the project	<i>Which Department budgeted for the project e.g. Education, Health Directorate</i>	KZN Department of Transport
Implementing public body type	<i>Example(Local Municipality, Distr. Mun or Provincial Dept.</i>	Provincial
Public body that will implement the project	<i>Infrastructure, Environment or Social</i>	KZN Department of Transport
Is this project on the Municipal IDP	<i>Municipal projects</i>	N/A
IDP reference number allocated to the project		N/A

EPWP Details		
EPWP Sector	<i>The project is implemented in which sector? (Infrastructure, Environment & culture, Non-state or Social)</i>	Infrastructure
EPWP programme	<i>The project is implemented under which programme?</i>	
EPWP Sub Programme	<i>The project is implemented under which sub-programme?</i>	
Budget Amount-(Allocations for the project duration)		
Funding Body	<i>Which Dept. is funding the project</i>	KZN Department of Transport
Funding Year	<i>Financial year/s for the project</i>	
Total Budget Amount	<i>(Exclude Professional Fees)</i>	
Incentive Grant(e.g. landcare / EPWP grant)	<i>Grant funding received</i>	
Total wages paid for the duration of the projects	<i>What amount will be spent on wages during the duration of the project</i>	
Wage Rate	<i>Daily Wage rate to be paid during productive work</i>	
Stipend Rate	<i>Daily wage rate to be paid during training</i>	
UIF	<i>The amount being paid to UIF (if applicable)</i>	
COIDA	<i>The amount being paid to COIDA(if applicable)</i>	
Training	<i>What amount will be spent on training</i>	
Administration	<i>The Administration costs</i>	
Equipment and materials	<i>Budget for Materials and Equipment</i>	
Other	<i>If other where chosen describe the other Such as Professional fees)</i>	
Describe other		
Project Outputs and Training		
Planned Primary Output	<i>eg walkways, gabions, kerb * channel, km of road constructed</i>	
Description of Planned Primary Output	<i>Describe the project output (end product and not the milestone) (e.g. kms of tar road constructed) Start with the unit of measure such as number of, kms, ha, sqms etc</i>	
Unit of measure of primary output	<i>Eg. m, m², m³, km, no, ha etc</i>	
Planned primary output quantity	<i>Specify the quantity of output planned</i>	
Number of persons to be trained	<i>How many persons are targeted for on job training</i>	

Contact person		
Title	Person responsible for the Project in the Public Body (Project Manager)	
Initials		
First Name		
Surname		
Email		
Tel (Office)		
Fax Number		
Cell Number		
Physical Address 1		
Physical Address 2		
Physical Address 3		
Physical Address 4		
Postal Address 1		
Postal Address 2		
Postal Address 3		
Postal Address 4		
Position of person		

Participant's personal details												Grants	Experience/Literacy		Location Details		Nationality	Household Details			Quality Check						
No	First Name as per ID document	Initials	Surname	ID number	Disability (Y/N)	Education Level	Start Date	End Date	Language ID	Address	Cell Number	Government Grant (Y/N) and Type	Other Language 1	Other Language 2	District Municipality	Local Municipality	Nationality (RSA/ Non-RSA)	Number of people in household	Number of Dependants in Household	Number of Children attending school	Picture Clear	Text clear	Certification within 3 months of employment	Clear certification	Commissioner details clear		

Participant Training Data													
Course ID	Course Name	Code	Training category (Accredited / non-accredited)	Type of training course (Unit standard, Trade Titles, Short courses, Public body specific)	Start	End (for the entire training duration)	Number of Trainees	Number of Days	Cost (for the entire training course)	Status of training (Not started, In progress, Completed)	Training Provider Name	Training Provider Contact Number	Training Provider Address

Department of Transport

EPWP Monthly Progress Form		
Field requested	Description if needed	Please complete the sections in white
Project Details		
Profile ID	full description of what is happening in the project (as per the appointment letter) and the community benefiting from the project	
Project Name	The name of the project	
Project Reference Number	Contract number	
Project description	Full description of what is happening in the project (as per the appointment letter) and the community benefiting from the project	
Month		
Reporting Month		April
Budget Expenditure		
Cumulative Expenditure Amount	What is the Overall amount spend on this project?	
Current Expenditure Amount	What is the amount spend including all grants for this month?	
Wages	How much paid on wages for this month only?	
UIF	How much paid on UIF for this month only?	
COIDA	How much paid on COIDA for this month only?	
Stipends for training	Amount paid to participants whilst on training (this month only)	
Amount spent on service providers for training	How much paid to service providers for training for this month only?	
Training	Total Cost of training for this month? (number captured on ERS)	
Administration	How much paid on administration for this month only?	
Equipment and materials	How much paid on equipment and materials for this month only?	
Other	How much paid on other?	
Describe other	Be specific e.g. Consulting fees, Transport etc.	
Project output description	Describe the project output (end product and not the milestone) (e.g. kms of tar road constructed) Start with the unit of measure such as number of, kms, ha, sqms etc	
Unit of measure of primary output	Eg. m, m ² , m ³ , km, no, ha etc	
Cumulative primary output achieved	Since the onset of the project	
Quantity Achieved	enter numeric output for this month only	
Percentage achieved	How much work done / achieved in percentages?	
EPWP Branding		
Branding compliant	Yes / No	
Date that the branding was provided	When was the project branded?	
Has a photo of project branding been provided?	Yes / No	
First name of Official Who Branded Project	Official Name	
Surname of Official Who Branded Project	Official Surname	
Phone number of official who erected branding for the project	Official contact number	
Give the public body reference and name, and organisational details of the person that provided branding.	Public body details (reference & name)	

First Name	Initials	Surname	ID number	Date Of Birth	Wage Rate	Total Paid Days	Amount Paid	Work Days	Training Days Paid	Training Days Non Paid	Total Training Days	Training Course ID	Project Profile ID	Month	Year	Beneficiary Code



The Attendance Register for on-site Workers

Reporting month: _____

Mobile No: _____

Project Name: _____

Contract no: _____

Surname: _____

First Name: _____

IDENTITY NUMBER:

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Day	Date	Time In	Signature	Time Out	Signature	Report On Any Formal Training Provided In The Reporting Month
WEEK 1						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
WEEK 2						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
WEEK 3						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
WEEK 4						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
WEEK 5						
MONDAY						
TUESDAY						
WEDNESDAY						
THURSDAY						
FRIDAY						
Total Days worked						

C3.3 PARTICULAR SPECIFICATIONS

PART F: SMALL CONTRACTOR DEVELOPMENT

PART F: SMALL CONTRACTOR DEVELOPMENT

F1. SCOPE

This part provides the procedures that relate to the Contractor implementing the CIDB B.U.I.L.D Standard for Indirect Targeting for Enterprise Development through construction Works Contracts, the Employer's policies and initiatives, enabling the Employer to realise its social and development objectives through the participation of Targeted Enterprises and Labour in the construction of the Works. The approach adopted enables the delivery of a wide range of social and economic deliverables, including the employment of local resources, employment opportunities for labour enhanced works, business opportunities, enterprise support and development programmes, and skills development.

The participation of Targeted Enterprises and Labour, measured in monetary terms, is specified as a contract participation goal by the Employer, for the Contractor to achieve.

The Contractor shall:

- Subcontract a minimum of 35% of the scope of works to targeted enterprises;
- Perform needs analysis on the targeted enterprise to identify developmental goals;
- Provide internal mentorship support to improve the targeted enterprise/s performance;
- Develop a project specific enterprise development plan to improve the targeted enterprise/s performance in the identified developmental areas to the CIDB Competence Standard for Contractors Gazette No. 41237, 10 November 2017
- Monitor and report the progress of the agreed development areas with the targeted enterprise/s
- Submit a project completion report to the Employer's representative for each targeted enterprise.

F2. DEFINITIONS

Unless inconsistent with the context, in these specifications the following terms, words or expressions shall have the meanings hereby assigned to them:

F2.1 **"Black People"** has the meaning assigned to it in section 1 of the Broad-Based Black Economic Empowerment Act, 2003 (Act No 53 of 2003), and the Broad-Based Black Economic Empowerment Amended Act, 2013 (Act No 46 of 2013).

F2.2 **"Contract Participation"** means a process whereby the Employer sets a target to achieve its social and development objectives through the participation of Targeted Enterprises and Labour in the construction of the Works.

F2.3 **"Contract Participation Goal (CPG)"** means the value of goods, services and works for which the Contractor contracts Targeted Enterprises and Labour exclusive of any value added tax which the law requires the Employer to pay to the Contractor, expressed as a percentage of the Contract Price (adjusted to exclude penalties and value added tax).

F2.4 **"EME"** means an exempted micro enterprise in terms of a 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 No 53 of 2003).

F2.5 **"Military Veteran"** has the meaning assigned to it in section 1 of the Military Veterans Act, 2011 (Act No 18 of 2011).

F2.6 **"people with disabilities"** has the meaning assigned to it in section 1 of the Employment Equity Act, 1998 (Act No 55 of 1998).

F2.7 **"Project Management Team (PMT)"** means a team established at the commencement of the contract, comprising a representative from each of the Employer, the Employer's Agent and the Contractor, that will be responsible for various functions related to the implementation of the Contract Participation process.

F2.8 **"QSE"** means a qualifying small enterprise in terms of a 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 No 53 of 2003).

F2.9 **“Target Area”** means the geographic area stated in the Contract Data.

F2.10 **“Targeted Enterprise”** means an entity to which the Contractor subcontracts a percentage of the contract value as a condition of contract and which is:

- (i) an EME or QSE which is at least 51% owned by black people;
- (ii) an EME or QSE which is at least 51% owned by black people who are youth;
- (iii) an EME or QSE which is at least 51% owned by black people who are women;
- (iv) an EME or QSE which is at least 51% owned by black people with disabilities; or
- (v) an EME or QSE which is at least 51% owned by black people who are military veterans.

F2.11 **“Targeted Labour”** means individuals, employed by the Contractor and subcontractors in the performance of the contract, who permanently reside in the target area or who are recognised as being residents of the target area on the basis of identification and association with and recognition by the residents of the target area, and excludes any labour employed by suppliers and manufacturers.

F2.12 **“Youth”** means persons between the ages of 18 and 35.

F3. CONTRACT PARTICIPATION

F3.1 Objective

In order for the Employer to realise its social and development objectives, the Contractor is required to provide business and labour opportunities through the participation of Targeted Enterprises and Labour in the construction of the Works. The participation of Targeted Enterprises and Labour, measured in monetary terms, is specified by the Employer as a contract participation goal, for the Contractor to achieve.

F3.2 Contract Participation process

The Contractor shall engage Targeted Enterprises and Labour in the performance of the contract to the extent that the total monetary value of such engagements exclusive of any value added tax, expressed as a percentage of the Contract Price (adjusted to exclude penalties and value added tax), is not less than the Contract Participation Goal specified in the contract.

F3.2.1 Contract Participation plan

The Contractor shall submit to the Employer’s Agent details of his plan to achieve the Contract Participation Goal with his initial programme in terms of which he will carry out the Works. The Contract Participation plan shall be submitted with all subsequent adjusted programmes. The tender process for the procurement of Targeted Enterprise subcontractors shall be indicated on the programme.

The Contract Participation plan shall indicate the expected delivery dates of goods provided by Targeted Enterprises, and the commencement and completion dates of work and services to be performed by all the Targeted Enterprises and Labour engaged on the contract for the purpose of securing credits towards the Contract Participation Goal.

The information contained in the Contract Participation plan facilitates, in the first instance, the monitoring by the Employer’s Agent of the performance of the Contractor in terms of his Contract Participation Goal obligations and, in the second instance, the making of any adjustments by the Contractor to compensate for quantitative underruns, the elimination of items contracted to Targeted Enterprises or Labour, or any other reason beyond the Contractor’s control which may be acceptable to the Employer

F3.2.2 Targeted Enterprises

The Contractor shall engage Targeted Enterprises comprising subcontractors and suppliers directly or indirectly in the performance of the contract. Prior to such Targeted Enterprises being engaged, the Contractor shall submit to the Employer's Agent documentation in a form approved by the Employer's Agent, to confirm that the enterprise satisfies the eligibility criteria for recognition as a targeted enterprise.

The Contractor shall enter into written contractual agreements with all the Targeted Enterprises, in a form approved by the Employer's Agent. Copies of such agreements and the written acceptance thereof shall be submitted to the Employer's Agent.

In the case of Targeted Enterprise subcontractors, only those subcontractors procured through a tender process as specified in clause G6 Tender Process for Targeted Enterprise Subcontractor Procurement, shall qualify to have their contribution count towards the Contract Participation Goal.

The Contractor may not subcontract more than 25% of the Contract Price to Targeted Enterprises whose B-BBEE status level of contributor is lower than the Contractor's.

F3.2.3 Targeted Labour

The Contractor shall engage Targeted Labour directly or indirectly in the performance of the contract. It is a requirement of the contract that such Targeted Labour be engaged by means of a written contract, in a form approved by the Employer's Agent.

The requirements for the engagement of such Targeted Labour is contained in PART E: Expanded Public Works Programme.

F3.3 Contract Participation Goal

The Contract Participation Goal comprises two targets, namely subcontracting of the Works to Targeted Enterprises, and employment of Targeted Labour. The Contract Participation Goal targets are stated as a percentage unit of measure in the Contract Data, for the Contractor to achieve to the extent that the total monetary value of such subcontracting and employment engagements exclusive of any value added tax, expressed as a percentage of the Contract Price (adjusted to exclude penalties and value added tax), are each not less than the respective Contract Participation Goal target stated in the contract.

F3.3.1 Monthly submission of supporting documentation

The Contractor shall prepare and submit on a monthly basis to the Employer's Agent in a form approved by the Employer's Agent, the following:

- (i) a brief report which describes the commercially useful functions performed by the Targeted Enterprises and Labour in the performance of the contract, both during the interim period and on a cumulative basis;
- (ii) a schedule reflecting the estimated total value of the contracts, the cumulative value of the contracts, and the value of goods provided, and work and services performed over the period for which payment is claimed with respect to each and every Targeted Enterprise; and
- (iii) a schedule which lists the names, identity numbers, gender, trade/occupation, period of employment, employment number and the like, as directed by the Employer's Agent, together with the respective wage rates payable in respect of Targeted Labour, including the monetary value of wages paid both on a cumulative basis and over the period for which payment is claimed.

- (iv) Project interim reports in the specified format (ED105P) detailing interim value of the CPG that was achieved. Such a report shall also contain a monthly progress report, compiled by the employer's representative and the contractor, detailing an assessment of the enterprise development support provided.
- (v) Project completion report, in the specified format (ED101P), to the Employer's Representative for acceptance within 15 days of achieving practical completion. The report shall include the value of the CPG that was certified in accordance with the contract, cidb registration numbers of each and every targeted enterprise and the value of the subcontracted works or the participation parameter of the joint venture entered into; and
- (vi) Enterprise development declaration (ED104P).

Should random inspections conducted by the Employer's Agent on Targeted Enterprise and Labour activities indicate that such Targeted Enterprises and Labour are not performing in accordance with the requirements of the contract, the Contractor shall provide, in addition to the monthly reporting requirements, separate weekly resource returns and any other relevant information with respect to such Targeted Enterprises and Labour in a form approved by the Employer's Agent.

F3.3.2 Contract Participation Goal credits

F3.3.2.1 Granting of credits

The Employer's Agent shall certify the value of the credits counted towards the Contract Participation Goal whenever a claim for payment is issued to the Employer, and shall notify the Contractor of the amount. The value of the credits counted shall not include any expenditure on Goods and Labour which forms part of the monetary value of the contributions made by Targeted Enterprise subcontractors.

Credits towards the Contract Participation Goal shall be granted by converting the value of the following (including contract price adjustment and rise/fall on special materials, but excluding value added tax) to a percentage of the Contract Price (adjusted to exclude penalties and value added tax), as relevant:

- (i) subcontracting CPG:
 - the total monetary value of the contributions made by Targeted Enterprise subcontractors in fulfilling contractual obligations; and
 - expenditure on Goods required for the contract, which are obtained from Targeted Enterprise suppliers.
- (ii) employment CPG:
 - the total monetary value of wages paid to Targeted Labour.

F3.3.2.2 Denial of credits

No credits shall be granted should the Contractor make a direct payment to a supplier or manufacturer on behalf of a Targeted Enterprise when such payment is recovered by making deductions from payments to the Targeted Enterprise in connection with the contract; or should the Contractor fail to enter into a written agreement with the relevant Targeted Enterprise.

In addition, credits claimed towards the Contract Participation Goal shall be denied where written contractual agreements contain any of the following:

- (i) a right to set off in favour of the employing Contractor not provided for by law;
- (ii) authoritarian rights given to the employing Contractor or his agent, with no recourse to independent adjudication in the event of a dispute arising;

- (iii) payment procedures based on a pay-when-paid system;
- (iv) a dispute resolution process which does not include inexpensive alternative dispute resolution procedures, such as mediation or adjudication, but which only makes use of formal proceedings such as arbitration or litigation; or
- (v) conditions which are more onerous than those which exist in the main contract.

Credits shall be denied should Targeted Enterprises not adhere to statutory labour practices or fail to perform commercially useful functions.

F3.3.3 Contract Participation Goal evaluation

The Contractor shall, upon completion of each individual Targeted Enterprise's contract, issue a completion certificate and certify the amount paid to such Targeted Enterprises. The Contractor shall submit the certificates, counter-certified by the relevant Targeted Enterprises, to the Employer's Agent for record-keeping purposes. The Contractor shall furnish justification to the Employer's Agent whenever it is not possible to obtain such counter-certification.

The Contractor shall, upon termination of the services of the individuals classed as Targeted Labour engaged in activities relating to the performance of the contract, certify the amount paid to such individuals and submit the certificate, counter-certified by the relevant individual, to the Employer's Agent for record-keeping purposes. The Contractor shall furnish justification to the Employer's Agent whenever it is not possible to obtain such counter-certification.

On completion of the contract, the Employer's Agent shall determine the final credits to be granted towards the Contract Participation Goal targets, by converting the value of credits (including contract price adjustment and rise/fall on special materials, but excluding value added tax) to a percentage of the Contract Price (adjusted to exclude penalties and value added tax)

F3.3.4 Sanctions

In the event that the Contractor fails to substantiate that any failure to achieve any of the Contract Participation Goal targets, is due to quantitative underruns, the elimination of items contracted to Targeted Enterprises, or any other reason beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable for a financial penalty as prescribed in clause SCC 4.1.1 of section C1.2.1.2 Special Conditions of Contract. The subcontracting financial penalty shall be calculated as follows:

$$P = 0,05 \times [(D - D_0)/100] \times C_A$$

where

- D is the Contract Participation Goal percentage
- D₀ is the Contract Participation Goal percentage which the Employer's Agent certifies, based on the credits passed, as being achieved upon completion of the contract
- C_A contract amount which is the Contract Price (adjusted to exclude penalties and value added tax)
- P is the monetary value of penalty payable

The evaluation of the Contractor's achievement of the Contract Participation Goal for the subcontracting of the Works to Targeted Enterprises, shall be undertaken monthly by the Employer's Agent based on the accumulative achievements in comparison to the programmed utilisation of Targeted Enterprises, as a means of monitoring the Contractor's performance in achieving the Contract Participation Goal.

Failure by the Contractor to achieve the Contract Participation Goal target by the time of Practical Completion, shall result in the financial penalty being applied as prescribed in this clause. The Employer's Agent shall make a final determination of the Contractor's achievement of the Contract Participation Goals based on the value of the Final Payment Certificate.

F4. DUTIES OF THE EMPLOYER AND ENGINEER

The Employer, Engineer, and the Contractor, or their representatives, are parties to the Project Liaison Committee and are co-responsible for successful project Stakeholder and Community liaison. The Employer and the Engineer also play a supporting role in the successful implementation of the Employer's Targeted Labour and Targeted Enterprise utilisation and development goals.

To implement the Employer's Targeted Labour and Targeted Enterprise goals, the Employer and the Engineer shall provide support to the Contractor by executing the following duties:

- (i) Make recommendations to the Contractor in the identification and structuring of the work packages to be subcontracted to Targeted Enterprises, and agree to the scope and extent of the work packages.
- (ii) Verify that the Targeted Enterprise Database(s), have been updated prior to the letting of every new set of subcontracts.
- (iii) Endorse all Databases, and approve tender procedures, tender documents, tender submission requirements and adjudication processes for the subcontracting of Targeted Enterprises.
- (iv) Review all tender adjudication reports and monitor that the criteria and procedures applied by the Contractor to subcontract work to Targeted Enterprises are executed in a fair and transparent manner, and are in accordance with the Employer's standards.
- (v) Endorse subcontract agreements and ensure that the conditions of subcontracting with Targeted Enterprises are fair and transparent and within the prescripts of the Contract requirements.
- (vi) Monitor the management of Targeted Enterprise subcontracts and ensure that conditions such as the application of penalties and the termination of contracts, are applied in a fair and transparent manner and within the prescripts of the agreement.
- (vii) Verify that the Labour Database(s) from which Targeted Labour will be employed is updated prior to every new Labour intake.
- (viii) Monitor that the criteria and procedures applied by the Contractor to employ Targeted Labour are executed in a fair and transparent manner, and is within the Contract requirements.
- (ix) Monitor that the conditions of employment of Targeted Labour are applied in a fair and transparent manner and within the prescripts of the current and relevant Labour legislation.
- (x) Make recommendations to the Contractor in the identification of the training requirements of Targeted Enterprises and Targeted Labour and approve the proposed training programmes.
- (xi) Monitor that training programmes and support programmes, which the Contractor committed to, are implemented and executed as intended.

F5. SPECIFIC WORK TO BE CARRIED OUT BY TARGETED ENTERPRISE SUBCONTRACTORS

F5.1 Subcontract scope of work

It is a requirement of the contract that only those Targeted Enterprise subcontractors procured through a tender process by the Contractor, shall qualify to have their contribution count towards the Contract Participation Goal.

For this particular contract, the following listed work has been identified in terms of this Particular Specification, PART F, as suitable for execution by Targeted Enterprise subcontractors in order to assist the Contractor in achieving the Contract Participation Goal:

- (i) Clearing and grubbing.
- (ii) Fencing
- (iii) Construction and clearing of drains.
- (iv) Installation of prefabricated culverts including inlet and outlet structures.
- (v) Concrete channelling and concrete linings for open drains.
- (vi) Pitching, stonework and protection against erosion.
- (vii) Construction of gabions.
- (viii) Erection of guardrails.
- (ix) Erection of road signs.
- (x) Steel Fixing
- (xi) Landscaping.
- (xii) Finishing the road and road reserve.
- (xiii) Other work identified by the Employer to be executed in the community area.

The work to be carried out by Targeted Enterprise subcontractors is not limited to the work listed above, and the Contractor may need to engage Targeted Enterprises and Labour on other aspects of the Works in order to achieve the Contract Participation Goal.

F5.2 Subcontract work packages

The work activities shall be grouped into varying sizes of work packages according to the CIDB contractor grading designation and class of construction works. The typical scope of work may include the following class of construction works and specialist works:

- (i) Class of construction works – Civil Engineering (CE); and
- (ii) Specialist Works:
 - Asphalt works (SB);
 - Demolition and blasting (SE);
 - Piling (SJ);
 - Road marking and signage (SK); and
 - Structural steelwork fabrication and erection (SL).

For this contract the minimum number of prescribed work packages for execution by Targeted Enterprise subcontractors is indicated in table F1/1 according to the CIDB contractor grading designation and the scope of work according to the Chapters of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

Provision is made for each of the work packages to include Chapter 1.3 Contractor's Establishment on Site and General Obligations to cover the costs of the Targeted Enterprise subcontractors' own establishment and general obligations.

TABLE F1/1: PRESCRIBED MINIMUM NUMBER OF WORK PACKAGES ACCORDING TO CIDB CONTRACTOR GRADING DESIGNATION TO BE DETERMINED IN CONJUNCTION WITH THE PMT							
CHAPTER	DESCRIPTION	TARGETED ENTERPRISE SUBCONTRACTOR CIDB CONTRACTOR GRADING DESIGNATION					
		1 Max: R0,5 m	2 Max: R1 m	3 Max: R3 m	4 Max: R6 m	5 Max: R10 m	6 Max: R20 m
	DRAINS	X (1)					
	CULVERTS			X (1)			
	CONCRETE KERBING AND CHANNELING, ASPHALT BERMS, CHUTES, DOWNPIPES, CONCRETE, STONE PITCHED AND GABION LININGS FOR OPEN DRAINS	X (2)	X (1)				
	ROAD AND SURFACING				X (2)		
	PITCHING, STONEMWORK, CAST IN SITU CONCRETE FOR PROTECTION AGAINST EROSION	X(1)					
	GABIONS	X (3)					
	ROAD RESTRAINT SYSTEM		X (1)				
	ROAD SIGNS	X (1)					
	Road Marking AND ROAD STUDS		X (1)				
	STEEL REINFORCEMENT			X (2)			
	MINIMUM TOTAL NUMBER OF TARGETED ENTERPRISE SUBCONTRACTORS PRESCRIBED FOR EACH CIDB CONTRACTOR GRADING DESIGNATION	8	3	3	2		

NOTE:

All work packages must include Chapter 1.3

X(1) denotes "one" prescribed subcontract work package according to the respective CIDB contractor grading designation and the scope of work according to the Chapter of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

For subcontractors with a higher CIDB contractor grading designation, it may be possible for the work package to comprise more than one chapter which is shown as "X" in the above table. The minimum total number of targeted enterprise subcontractors prescribed for each CIDB contractor grading designation is listed in the above table.

F5.3 Subcontract bill of quantities

The items of work identified for execution by Targeted Enterprise subcontractors is shown in the bill of quantities at the end of Part F: Small Contractor Development. The quantities of work shown for each item of work, is the anticipated work to be subcontracted, and the Contractor is not required to tender rates and prices for these items of work.

Payment of the works executed by Targeted Enterprise subcontractors will be made under the provisional sum allowed for in clause F10 Measurement and Payment and included in Schedule F: Small Contractor Development in Section C2.2 Bill of Quantities.

F6. TENDER PROCESS FOR TARGETED ENTERPRISE SUBCONTRACTOR PROCUREMENT

F6.1 Subcontract scope of work

The Contractor shall refer to Table F1/1 for the work packages identified to be subcontracted, the bill of quantities contained in these Particular Specifications, and to any other construction activities required to execute the Works in terms of the contract, to determine how he intends to unbundle or package specific subcontracts for execution by Targeted Enterprise subcontractors, and shall present his proposal to the Employer and Employer's Agent for approval.

F6.2 Compilation of subcontract tenders

The Contractor shall be responsible for compiling the tender documents that will enable him to engage the Targeted Enterprise subcontractors for the various work packages, according to the contractor grading designation and class of construction works or specialist works. The Contractor shall compile each subcontract tender document in such a manner that it shall facilitate the achievement of all objectives and principles pertaining to the development of the Targeted Enterprise subcontractors.

The tender documentation shall comply with the Employer's standards, including its standard conditions of tender. The following returnable schedules shall form part of the tender document for submission by tenderers:

- (i) certificate of registration of the tenderer in the required CIDB contractor grading designation, confirming the tenderer's registration Status as "Active" at the closing date of tender submission;
- (ii) tax compliance status report;
- (iii) B-BBEE verification certificate or sworn affidavit;
- (iv) proof of registration on the Central Supplier Database; and
- (v) compliance with the COID Act.

The tender documents shall also contain the proposed subcontract agreement in accordance with clause F8.1.

The draft tender documents shall be subject to approval by the Employer and Employer's Agent. The Contractor may then proceed with the preparation of tender documents for the work packages.

F6.3 Tender process

The Contractor shall be responsible for advertising the tenders for the work packages, and inviting

tenders from Targeted Enterprise subcontractors in consultation with the Employer and Employer's Agent and the local PLC.

The Employer shall identify the number of work packages which are to be executed by Targeted Enterprise subcontractors from specific designated groups.

The Contractor shall conduct a compulsory briefing session for tenderers, attended by the Employer and Employer's Agent, to explain the Works required and the tender process to the Targeted Enterprise subcontractors.

Tenders for the subcontracted works must close at a stipulated time and date. Tenders shall be placed in a suitable formal Tender Box, located at the Contractor's site office. The tender opening shall be conducted by the Project Management Team.

F6.4 Tender evaluation

The Project Management Team shall evaluate the tenders according to the Employer's standards. The Contractor shall prepare the tender adjudication report for each subcontract, and submit it to the Project Management Team for review prior to award of each subcontract.

F6.5 Allocation of subcontract work packages

The Project Management Team shall identify responsive tenders received for the various work packages from Targeted Enterprises in the following designated groups:

- (i) an EME or QSE which is at least 51% owned by black people;
- (ii) an EME or QSE which is at least 51% owned by black people who are youth;
- (iii) an EME or QSE which is at least 51% owned by black people who are women;
- (iv) an EME or QSE which is at least 51% owned by black people with disabilities; or
- (v) an EME or QSE which is at least 51% owned by black people who are military veterans.

The selection of subcontract work packages shall then be made, in consultation with the Employer in accordance with the provisions of clause 4.4.4 of the General Conditions of Contract 2015, in order to comply with the Employer's targeted procurement objectives.

F6.6 Award of subcontract work packages

Following the selection of the Targeted Enterprise subcontractors for the various work packages in consultation with the Employer in accordance with clause 4.4.4 of the General Conditions of Contract 2015, the Employer's Agent shall provide written confirmation of the Targeted Enterprise subcontractor selected for each work package, to the Contractor. The Contractor shall award each work package to the respective Targeted Enterprise subcontractor.

F7. GENERAL RESPONSIBILITIES OF THE CONTRACTOR TOWARDS TARGETED ENTERPRISES

F7.1 Obligations

The Contractor shall ensure that he complies with the following obligations:

- (i) institute a quality assurance system;
- (ii) provide adequate training, coaching, guidance, mentoring and assistance to Targeted Enterprises;

- (iii) provide financial support and other assistance to ensure that Targeted Enterprises are able to meet their obligations and commitments with respect to their subcontracts, including acquisition of labour, construction equipment and materials;
- (iv) ensure that the contract participation goals and objectives are achieved; and
- (v) make provision for Targeted Enterprises to be established within the Contractor's own camp facilities, and be responsible for the provision of site offices, common camp facilities, medical, security, safety, electricity, water, sewage services, waste disposal and all other camp services.
- (vi) be responsible for developing subcontractors in accordance with the cidb Standard for Indirect Targeting for Enterprise Development.
- (vii) be responsible for the appointment of the Enterprise Development Coordinator.

F7.2 Subcontracts

In the subcontracts arranged by the Contractor involving Targeted Enterprises, the following shall apply:

- (i) the appointment of Targeted Enterprises by the Contractor shall be made in accordance with the provisions of clause 4.4 of the General Conditions of Contract 2015; and
- (ii) no provision or requirements set out in the specifications shall be deemed to relieve the Contractor of any liability or obligation under the contract, and in accordance with the provisions of clause 4.4.3 of the General Conditions of Contract 2015, the Contractor shall be liable for the acts, defaults and negligence of any Targeted Enterprise, his agents or employees as fully as if they were the acts, defaults or negligence of the Contractor.

F8. MANAGEMENT OF TARGETED ENTERPRISE SUBCONTRACTS

The Contractor shall conclude the subcontract agreements and provide the necessary management support to the Targeted Enterprises. Failure by a Targeted Enterprise to comply with the terms and conditions of the subcontract agreement shall result in penalties being applied or the subcontract terminated.

F8.1 Compilation of subcontract conclusion agreement

- (a) The Contractor in liaison with the Employer and Employer's Agent shall be responsible for the conclusion of each subcontract agreement. The agreement shall be in accordance with the provisions of clause 4.4 of the General Conditions of Contract 2015 and shall be consistent with the terms and conditions in this contract. The agreement shall be subject to approval by the Employer and Employer's Agent.
- (b) The terms and conditions of the subcontract agreement shall also specify the following:
 - (i) an entitlement of the Targeted Enterprise to receive such training as is contemplated in this contract;
 - (ii) an obligation on the Targeted Enterprise to participate and co-operate in such training as is provided for in this contract;
 - (iii) the allowable sources from which workers may be drawn in terms of the contract;
 - (iv) the terms and conditions relating to the recruitment, employment and remuneration of workers engaged on the contract;
 - (v) the training to be provided to the workers; and
 - (vi) the terms and conditions relating to payment of the Targeted Enterprise. Such terms and conditions shall also include a clause stipulating that payment to a Targeted

Enterprise for work done shall be made within 30 days of submission of the invoice by the Targeted Enterprise to the Contractor. In the event of failure by the Contractor to make the payment by the due date, he shall pay to the Targeted Enterprise interest, at the prime overdraft rate charged by the Targeted Enterprise's bank, compounded monthly, on all overdue payments from the date on which the same should have been paid to the date when payment is effected, without prejudice to the Targeted Enterprise's other rights under the contract or by law.

F8.2 Quality of work and performance of the Targeted Enterprise

- (a) The Contractor shall closely monitor and supervise all Targeted Enterprises and shall train, mentor, guide and assist each Targeted Enterprise in all aspects of management, execution and completion of his subcontract. This shall typically include assistance with planning of the works, sourcing and ordering of materials, labour relations, monthly measurements and invoicing procedures. The extent and level of such training, mentoring, guidance and assistance to be provided by the Contractor shall be commensurate with the basic level of subcontract applicable and shall be directed at enabling the Targeted Enterprise to achieve the successful execution and completion of their subcontract.
- (b) The Contractor shall closely monitor and supervise all Targeted Enterprises and shall give reasonable warning to the Targeted Enterprise when any contravention of the terms and conditions of the subcontract has occurred or appears likely to occur. The Contractor shall, whenever feasible, give the Targeted Enterprise reasonable opportunity to make good any such contravention, or to avoid such contravention, and shall render all reasonable assistance to the Targeted Enterprise in this regard.

F8.3 Dispute avoidance and resolution procedures

- (a) When taking any disciplinary action or imposing a penalty as provided for in the subcontract, the Contractor shall explain fully to the Targeted Enterprise that such actions are provided for in the subcontract. If such action is contemplated this shall be discussed with the Employer's Agent before any action is taken.
- (b) If the Targeted Enterprise, in the opinion of the Employer's Agent, fails to comply with any of the criteria listed below, the Employer's Agent shall issue a written warning to the Contractor, stating all the areas of non-compliance. A copy of the letter of warning shall be forwarded to the Employer. The criteria are as follows:
 - (i) acceptable standard of work as set out in the specifications;
 - (ii) progress in accordance with the time constraints in the Targeted Enterprise's contract;
 - (iii) punctual and full payment of the workforce and suppliers;
 - (iv) site safety; and
 - (v) accommodation of traffic.
- (c) The Targeted Enterprise shall have 21 days from the date of receipt of the letter of warning by the Contractor to address and rectify the issues raised by the Employer's Agent, with the exception of the above subclauses (b)(iv) and (v) for which the reaction time shall be in accordance with the relevant specifications for those aspects of the Works but shall not be longer than 24 hours. Failure by the Targeted Enterprise to comply with the deadline set, will be sufficient grounds for the Contractor to apply a penalty, or terminate the subcontract provided that the Employer's Agent is satisfied that the Contractor has made every effort to correct the performance of the Targeted Enterprise.
- (d) The Targeted Enterprise shall have the right to dispute any ruling given or deemed to have been given by the Contractor, Employer's Agent or Employer. Provided that, unless the Targeted Enterprise shall, within 21 days after his receipt of a ruling or after a ruling shall have been deemed to be have been given, give written notice (hereinafter referred to as a Dispute Notice) to the Contractor, referring to this clause, disputing the validity or correctness of the whole or a specified part of the ruling, he shall have no further right to dispute that ruling or the part thereof not disputed in the said notice.

F9. TRAINING, COACHING, GUIDANCE AND MENTORING

F9.1 Obligations

This section provides details of the Contractor's obligations of implementing the National Skills Development Strategy. This strategy sets priorities for the skills development of workers. The Sector Education and Training Authorities (SETA) and provincial offices of the Department of Labour will play key roles in transforming the vision of the strategy into reality.

Supervision is included as part of the contractor's general obligations for the administration and management of the Targeted Enterprises. However, training, coaching, guidance and mentoring are not included as part of the Contractor's general obligations unless specific provision to that effect has been made in the project specifications.

The Contractor shall, from the commencement of the contract, provide a structured development programme designed to improve the entrepreneurial and basic business management skills of identified Targeted Enterprises and hired labour, as well as to improve their specific task skills (construction skills) commensurate with the applicable levels of subcontract that will enable the Targeted Enterprises to achieve the successful execution and completion of their subcontracts. The ultimate objective of training, coaching, guidance and mentoring is to develop the Targeted Enterprises as far as their potential allows.

F9.2 Definitions

F9.2.1 Training

Training refers to the process of teaching a learner – usually in a classroom or simulated work environment situation. Training usually takes place with one teacher/trainer and several learners. Principles and theory are taught. Demonstrations are given. Assignments are then set to ensure that the learner is able to apply what has been taught. Training is done by a specialist in the subject, who is also qualified to train.

Example: Use of a dumpy level

Training would involve the theory of how a dumpy level works and how to calculate levels. A demonstration of how to set up and read a level could be given.

F9.2.2 Coaching

Coaching refers to hands-on training and is mostly on a one-on-one basis of tangible and measurable skills. It is typically on-site training, or learning-on-the-job. Coaching is training by the process of “watch-do-correct-practice”. The coach does the task while the learner watches and asks questions. Then the learner does the same task while the coach watches. The learner is corrected until the coach feels that he has the gained competence in the function. The learner is then left to practise the task or skill, which the coach oversees. Coaching is imparting a skill – usually manual or physical. A coach is usually a person doing the same type of work on a higher or more competent level, or a person who has a mastery of the skill/task. While training gives the theory or shows/explains the principles, coaching helps the learner become competent and master a skill. A coach is often in the direct reporting line, i.e. someone in authority. Coaching could be part of the management function and would make the job run more smoothly.

Example: Use of a dumpy level

Coaching would involve taking the learner onto site, setting up a dumpy level, reading levels. Then the coach would get the learner to do the job, while the coach checked the setting up and reading. Once the learner understands and can do the tasks, the coach checks periodically to ensure the learner is still doing the job properly.

The desired outcome of coaching is for the learner to “fit-the-mould”, and to do things the same way

and to the same standard as the coach.

F9.2.3 Guidance

Guidance is anticipating where one might go wrong, or where one is doing a task in a complicated, inefficient or ineffective way, and giving advice as to how to achieve a better result. Guidance is mostly given by a person in the direct reporting line, but can be given by anyone. Guidance is not imparting skills, but suggesting ways to improve performance.

Example: Use of a dumpy level

A person who knows how to use a dumpy level would be given guidance as to where he would next set up the level to limit the number of set-ups. Guidance could be an extension of coaching.

F9.2.4 Mentoring

Mentoring is developing a person on a long-term career path. It is mostly about imparting skills that are often intangible and non-measurable. A mentor is seldom anyone in the direct reporting line – although he could be a person several levels higher in that reporting line. Mentoring is more about developing a relationship and taking a personal interest in an individual. A mentor looks out for that individual and gives him advice that cannot be found in a book or in the normal course of business. The sort of issues a mentor discusses with the protégé include company politics, how to pick up work before others get wind of it, how to position one's company to get a better competitive advantage, how to tender such that the tender is lowest but the profit is as good as or better than the next person, how to determine and assess risk. Mentoring helps the protégé think strategically, sharpen entrepreneurial skills and grow – both personally and in terms of the company. A mentor helps the protégé to develop insight and shrewdness. It is more about business skills to survive long-term than the technical, tactical or day-to-day activities of doing business.

The desired outcome of mentoring is for the protégé to develop his own style, i.e., to shape his own "mould".

F9.2.5 Supervision

Supervision is instruction regarding the work to be performed, and ensuring it is carried out to specification and to the satisfaction of the supervisor. It is not instruction on how the work is to be performed, but rather on what work has to be performed, and usually has specific time frames.

F9.3 Assessment of Targeted Enterprise potential

It is the responsibility of the Contractor to determine the level of development required by each Targeted Enterprise. This will require that the Contractor determine the level at which the Targeted Enterprise can operate competently and determine the skills already acquired by the Targeted Enterprise in terms of training and on-the-job experience. In some circumstances Adult Basic Education Training (ABET) will need to be started before any formal training can commence. The assessment of each appointed Targeted Enterprise is to be produced by the Contractor for discussion with the Employer and Employer's Agent at a meeting following the appointment of the Targeted Enterprise.

F9.4 Development Plan

Within a month of the meeting with the Employer and Employer's Agent on the Targeted Enterprise assessments, the Contractor is to present a development plan, specific to each Targeted Enterprise. The development plan is to be reviewed by the Employer and Employer's Agent for appropriateness before being implemented.

The development plan is to include the following:

- (i) specify the development needs of each Targeted Enterprise contracting entity – the systems the entity lacks;

- (ii) specify the development needs of the individuals comprising the entity – the skills the individuals within the entity lack;
- (iii) the level to which that activity will be developed within the period of the contract;
- (iv) whether training, coaching, guidance and/or mentoring is to be given in each activity; and
- (v) the person/s responsible for each activity.

F9.5 Identification and general training of potential Targeted Enterprises

- (a) The progression of training, coaching and mentorship may need to start with the identification and general training of identified Targeted Enterprises and hired labour, and should end with their acquisition of sufficient management skills that will equip them to compete confidently for subcontract work beyond the duration of this contract. In addition, generic skills shall be taught where the need for these has been identified as being necessary amongst Targeted Enterprise workforces and hired labour.
- (b) Before commencing with any structured training, the Contractor shall submit his intended programme to the Employer and Employer's Agent for approval of its subject content and proposed trainers, and the Contractor shall, if so, instructed by the Employer and Employer's Agent, alter or amend the programme and/or course content.

The Contractor shall be responsible for the provision of everything necessary for the delivery of the various training workshops and modules including:

- (i) provision of a suitable fully serviced training venue facility;
- (ii) procurement of suitable accredited trainers;
- (iii) provision, in conjunction with the accredited trainers, of all the necessary training materials, including stationery and study materials; and
- (iv) transportation of the learners to and from the training venue facility (it is therefore in the Contractor's interest that the training venue facility be provided on the site in order to reduce these transportation costs).

Payment to the Contractor for carrying out the training function shall be effected through the pay items provided in this PART F, using the training facility provided under PART E: Expanded Public Works Programme.

F9.6 Activities

The tasks for each of the activities making up the development plan include material, equipment and general tasks, for training on technical, contractual, financial, human resources, legislative and general administrative functions.

The Construction Manager, site clerk and HR Manager will train/coach or mentor the above listed functions as part of on-site training.

F9.7 Portfolio of Evidence

The Contractor is to develop and/or maintain a portfolio of evidence for each Targeted Enterprise. The Portfolio of Evidence is a collection of proof of the training, coaching, guidance and mentoring inputs provided to the Targeted Enterprise and is similar to a log book used by technical students completing experiential training. It is a living document which records the development progress of the Targeted Enterprise and will need to be updated continually throughout the duration of the contract. It remains the property of the Targeted Enterprise who must take it to their next contract.

The Portfolio of Evidence should include the following documentation:

- (i) the development path designed for each Targeted Enterprise;
- (ii) the training courses completed by the Targeted Enterprise;
- (iii) the hours of guidance, coaching and mentoring received for each activity listed in the development plan;

- (iv) a list of outcomes achieved at each level for each activity;
- (v) six-monthly progress reports on the development provided (inputs) versus the actual progress made (output) by the Targeted Enterprise; and
- (vi) a list of competencies.

F9.8 Training Requirements

Only qualified trainers employed by training agencies that are accredited by the relevant Sector Education and Training Authorities (SETA), or other institutions recognised by the Department of Labour shall deliver any training. "Accredited training" refers to both the trainers as well as to the training material. Certificates affirming the successful participation in the various courses shall be presented to each attendant.

The Contractor shall facilitate in the delivery of training by instructing and motivating the hired labour and relevant Targeted Enterprises regarding attendance and participation. All training shall take place within normal working hours, or as agreed with the trainees.

F9.9 Development training

The Contractor will arrange training to support the development of the Targeted Enterprise. This training must be provided by training providers accredited with the relevant SETA pertaining to the course material being presented. The training will take place at hours agreed with the trainees, possibly on a part time basis after hours.

The following training courses are recommended to support the development programme detailed in the contract document:

- (i) NQF Level 2: Construction Contractor - Business owner and administration officer;
- (ii) Tender training NQF Level 3 – Business owner / Technical expert;
- (iii) Computer literacy training - Business owner and admin officer – Microsoft Windows, email, Microsoft Word and Microsoft Excel;
- (iv) General bookkeeping relevant to construction - Business owner and admin officer;
- (v) Tendering NQF Level 4 and 5 – Business owner / Technical expert; and
- (vi) Construction supervision (Roadworks) NQF Level 4 – Business owner / Technical expert.

F9.10 Safety Training

The Targeted Enterprise's safety representative is to be fully trained in all aspects of safety and his duties in this regard. The owner of the Targeted Enterprise is to be trained on his responsibilities regarding safety regulations.

F9.11 Construction skills training

The focus of training provided on the contract should be to support the development of the Targeted Enterprise subcontractor. Construction skills training will only be approved by the Employer's Agent when appropriate.

The Targeted Enterprise, their workforce and hired labour that are selected will be entitled to receive structured training that will improve on-task skills necessary for the execution and successful completion of the works. The Contractor, in conjunction with the Employer's Agent, shall monitor the progress of the hired labour and each Targeted Enterprise closely and shall identify those who, in their collective opinion, will benefit from structured construction skills training as may be provided for in the contract, and where required by the Employer's Agent shall make recommendations in this regard. The final list of candidates shall be decided between the Contractor and the Employer's Agent, and those selected

shall receive formal construction skills training in a programmed and progressive manner throughout the duration of the contract.

The training programme shall offer complete courses that could comprise some or all of the following modules:

- (i) Use and maintenance of hand tools;
- (ii) Operation of equipment;
- (iii) Manufacture and installation of minor precast concrete units;
- (iv) Erect, dismantle and maintain formwork;
- (v) Basic concrete skills;
- (vi) Excavation, backfill and compaction;
- (vii) Bricklaying; and
- (viii) Erosion protection using stone pitching, gabions or renos.

F9.12 Training venue facility

The training venue facility to be provided by the Contractor is described in clause E5.6 of PART E. This facility shall be used to deliver all training, irrespective of whether it is delivered in terms of PART E or PART F of the Particular Specifications.

F9.13 Enterprise Development Co-ordinator

The contractor shall appoint an Enterprise Development Co-Ordinator who shall:

- a) develop a project specific Enterprise Development plan to improve the targeted enterprise's performance in the identified developmental areas and shall allocate resources to monitor progress in relation to improved performance; and
- b) shall, submit to the employer's representative a monthly enterprise development report (Performa – ED105P) which documents all mentoring activities that have taken place during that month and the progress made in improving the targeted enterprise's performance in the agreed developmental areas, countersigned by the targeted enterprise.

Competence Criteria for an Enterprise Development Co-ordinator

The enterprise development co-ordinator shall have the following competencies:

- 1.1 Minimum experience of 5 years in the construction industry at Managerial level as a Site Agent, Contracts Manager, Site Manager, Construction Manager, Business Development Manager or Enterprise Development Manager.
- 1.2 Minimum experience of 2 years in training and development in Building or Construction; and
- 1.3 National Diploma or B Degree in the Built Environment or Business Management

F10. MEASUREMENT AND PAYMENT

Note:

In order to avoid duplication of training facilities, the training facility required for the training described in this PART F: Small Contractor Development, shall be measured and paid for in terms of the pay items provided for training in PART E: Expanded Public Works Programme.

Item **Unit**

F10.01 Procurement of Targeted Enterprises:

- (a) Management and execution of Targeted Enterprise procurement process:
- (i) Procurement process for the appointment of CIDB contractor grading designation 1 Targeted Enterprise subcontractor (100 copies of the tender document required for each individual tender) number (No)
- (ii) Procurement process for the appointment of CIDB contractor grading designation 2 Targeted Enterprise subcontractor (80 copies of the tender document required for each individual tender) number (No)
- (iii) Procurement process for the appointment of CIDB contractor grading designation 3 Targeted Enterprise subcontractor (60 copies of the tender document required for each individual tender) number (No)
- (iv) Procurement process for the appointment of CIDB contractor grading designation 4 Targeted Enterprise subcontractor (50 copies of the tender document required for each individual tender) number (No)

The unit of measurement shall be the number of individual subcontract agreements concluded with Targeted Enterprise subcontractors according to the CIDB contractor grading designation for all classes of construction works, in accordance with the procurement process described in this PART F.

Each tendered rate shall be in full compensation for the management and execution of the Targeted Enterprise procurement process in the relevant CIDB contractor grading designation scheduled, including for the compilation, printing, binding and issue of the tender documents for each tender, for the advertising of each tender, for the provision of the venue and the conducting of each compulsory briefing session for tenderers, for the conducting of each tender opening process, for the adjudication of the tenders received for each tender, for the preparation of each tender adjudication report and the review thereof in conjunction with the Employer and Employer’s Agent, for the award of each tender and for the conclusion of the subcontract agreement with each successful Targeted Enterprise subcontractor tenderer.

Item **Unit**

F10.02 Construction Works for Targeted Enterprise subcontractors:

- (a) Payments associated with the construction Works carried out by Targeted Enterprise subcontractors provisional sum (Prov sum)
- (b) Handling costs and profit in respect of

- subitem F10.02(a)percentage (%)
- (c) Supply of materials and small construction equipment to assist Targeted Enterprise subcontractors..... provisional sum (Prov sum)
- (d) Handling costs and profit in respect of subitem F10.02(c)percentage (%)
- (e) Management of the Targeted Enterprise subcontractors
- (i) Needs Analysis and Enterprise Development Plan per Targeted EnterpriseNumber (No)
- (ii) Monitoring and Interim reporting per Targeted Enterprise Per Quarter
- (iii) Project Completion report per Targeted EnterpriseNumber (No)
- (iv) Skills Development Co-Ordinator
(No/month)

Expenditure under subitems F10.02(a) and (c) shall be in accordance with clause 6.6 of the General Conditions of Contract 2015.

The provisional sum for subitem F10.02(a) is provided to cover the total cost of the construction Works carried out by the Targeted Enterprises subcontractors based on proof of payment made by the Contractor, as certified by the Employer's Agent, in separate payments for each Targeted Enterprise subcontractor in accordance with PART F of the Particular Specifications.

The tendered percentage for subitem F10.02(b) is the percentage of the amount actually spent under subitem F10.02(a), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the construction Works carried out by the Targeted Enterprise subcontractors.

The provisional sum for subitem F10.02(c) is provided to cover the total cost of the materials and small construction equipment supplied by the Contractor to assist the Targeted Enterprise subcontractors based on proof of payment made by the Contractor, as certified by the Employer's Agent, in separate payments for each Targeted Enterprise subcontractor in accordance with PART F of the Particular Specifications.

The tendered percentage for subitem F10.02(d) is the percentage of the amount actually spent under subitem F10.02(c), and shall include full compensation for the handling costs of the Contractor and the profit in connection with the supply of materials and small construction equipment by the Contractor to assist the Targeted Enterprise subcontractors.

The unit of measure for subitem F10.02(e)(i) shall be the Number of Needs analysis and enterprise development plan per Targeted Enterprise. Only one (1) plan will be developed per Targeted Enterprise. The rate shall include full compensation for the development of the Needs Analysis Plan to the satisfaction of the Employer, meeting all the CIDB requirements and shall including any consultations undertaken by the contractor in the development of the plans.

The unit of measure for subitem F10.02(e)(ii) shall be Per Quarter of Monitoring and Interim Reporting per Targeted Enterprise. Payment shall only be made for the period the appointed Targeted Enterprise subcontractors are on site in the execution of the works. The tendered rate shall include full compensation for the conclusion of all the subcontract agreements and the management of all Targeted Enterprise subcontractors, including for the provision of the necessary management support, coaching, guidance and mentoring to the Targeted Enterprise subcontractors.

The unit of measure for subitem F10.02(e)(iii) shall be the Number of Project Completion Reports Completed per Targeted Enterprise. Only one (1) report will be developed per Targeted Enterprise. The

rate shall include full compensation for the development of the Completion Report to the satisfaction of the Employer, meeting all the CIDB requirements and shall including any consultations undertaken by the contractor in the development of the report.

The Skills Development Co-Ordinator under subitem F10.02(e)(iv) shall be compensated as per the Number (No) of Targeted Sub Contractors currently employed and actively working on site only for the month. The rate shall include full compensation for all costs associated with developing a project specific Enterprise Development plan and submitting to the employer's representative a monthly enterprise development report (Performa – ED105P) all as per the provisions of F9.13. This rate shall also include any travelling, incidentals, communication costs and any other costs deemed as a requirement for the Skills Development Co-Ordinator to execute their duties. No other claims may be made anywhere else which shall be associated with the Skills Development Co-Ordinator.

Item	Unit
F10.03 Training of Targeted Enterprise subcontractors:	
(a) Generic skills:	
(i) Training costs provisional sum (Prov sum)	
(ii) Handling costs and profit in respect of subitem F10.03(a)(i)percentage (%)	
(b) Entrepreneurial skills:	
(i) Training costs provisional sum (Prov sum)	
(ii) Handling costs and profit in respect of subitem F10.03(b)(i)percentage (%)	
(c) Construction skills:	
(i) Training costs provisional sum (Prov sum)	
(ii) Handling costs and profit in respect of subitem F10.03(c)(i)percentage (%)	
(d) Transportation and accommodation costs of selected learners only, while receiving off-site training:	
(i) Transportation and accommodation costsprovisional sum (Prov sum)	
(ii) Handling costs and profit in respect of subitem F10.03(d)(i)percentage (%)	

Expenditure under subitems F10.03(a)(i), (b)(i), (c)(i) and (d)(i) shall be in accordance with clause 6.6 of the General Conditions of Contract 2015.

The provisional sum for each of subitems F10.03(a)(i), (b)(i) and (c)(i) is provided to cover the total costs of the required training in generic skills, entrepreneurial skills and construction skills respectively, including for the procurement of the services of the accredited trainers and their delivery of the training courses to the learners employed by Targeted Enterprise subcontractors, the provision of all training materials including all stationery and study materials, and the wages of the learners for the duration of the courses. The payment of wages to learners in terms of subitems F10.03(a)(i), (b)(i) and (c)(i) will only be made to those learners who attend and successfully complete each course of the approved

training programme. Payment shall not be made to learners who, once selected, do not attend or only partially complete structured training courses.

The Contractor's own personnel shall be permitted to attend the training courses provided for the learners employed by the Targeted Enterprise subcontractors only to the extent that the venue and its facilities can efficiently and comfortably accommodate the additional number of learners. All additional costs relating to such attendance by the Contractor's own personnel shall be carried by the Contractor and shall not be considered for payment in terms of item F10.03, including for any additional costs related to the accredited trainers and their delivery of the training courses, the provision of additional training materials, and the wages of the learners from the Contractor's own personnel for the duration of the courses.

The tendered percentage for each of subitems F10.03(a)(ii), (b)(ii) and (c)(ii) is the percentage of the amount actually spent under each of subitems F10.03(a)(i), (b)(i) and (c)(i) respectively, and shall include full compensation for the handling costs of the Contractor, and the profit in connection with the provision of the training in generic skills, entrepreneurial skills and construction skills respectively, including for the costs of record keeping and reporting with respect to the training received by each learner, and the costs of the compilation of the portfolio of evidence with respect to each Targeted Enterprise subcontractor.

The provisional sum for subitem F10.03(d)(i) is provided to cover all costs related to the transportation and accommodation costs of selected learners only, while receiving off-site training, where such learners have been specifically selected in conjunction with the Employer's Agent to receive such off-site training and where such training cannot be delivered using the training venue facility provided by the Contractor.

The tendered percentage for subitem F10.03(d)(ii) is the percentage of the amount actually spent under subitem F10.03(d)(i), and shall include full compensation for the handling costs of the Contractor, and the profit in connection with the transportation and accommodation costs of selected learners only, while receiving off-site training.

BILL OF QUANTITIES
PART F: SMALL CONTRACTOR DEVELOPMENT

THE CONSTRUCTION OF THE NEW MKUZE BRIDGE NO.3801 AT KM 27.440 IN ZULULAND DISTRICT UNDER EMPANGENI REGION.

Contract No. ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C1.3	CONTRACTOR'S SITE ESTABLISHMENT AND GENERAL OBLIGATIONS			
C1.3.1	The Contractor's general obligations			
C1.3.1.1	Fixed obligations	L/Sum		1
C1.3.1.2	Value-related obligations	L/Sum		1
C1.3.1.3	Time-related obligations	month		30
C1.3.2	Contract sign boards	m ²	LI	12

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SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C3.1	DRAINS			
C3.1.1	Excavation for open drains:			
C3.1.1.1	Excavating all material situated within the following depth ranges below the surface level using conventional methods :			
	(a) 0m to 1.5m	m ³	LI	413
	(b) Exceeding 1.5m and up to 3.0m	m ³	LI	413
	(c) Etc, in increments of 1.5m	m ³	LI	206
C3.1.1.2	Extra over sub-item C3.1.1.1 for excavation in hard and bould material , irrespective of depth	m ³	LI	206
C3.1.1.4	Excavating soft material situated 0m to 1.5m below the surface level using labour enhanced construction methods	m ³	LI	83
C3.1.1.5	Excavating intermediate material situated 0m to 1.5m below the surface level using labour enhanced construction methods	m ³	LI	41

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Contract No. ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

EM	DESCRIPTION	UNIT	LI	QTY
C3.2	CULVERTS			
C3.2.1	Excavation for culvert structures:			
C3.2.1.1	Excavating in all material situated within the following depth ranges below the surface level:			
	(a) 0m to 1.5m	m ³	LI	743
	(b) Exceeding 1.5m and up to 3.0m	m ³	LI	149
	(c) Etc, in increments of 1.5m	m ³	LI	149
C3.2.1.2	Excavating soft material 0 m to 1,5 m below the surface level using labour enhanced construction methods, or instructed by hand under Clause A3.2.7.2d):	m ³	LI	74
C3.2.1.4	Extra over sub-item C3.2.1.1 for excavation in hard or boulder material, irrespective of depth	m ³	LI	74
C3.2.2	Backfilling:			
C3.2.2.1	Using the excavated material	m ³	LI	79
C3.2.2.2	Using imported selected material:			
	(a) From commercial sources	m ³	LI	23.76
	(b) From sources on site	m ³	LI	95.04
C3.2.2.3	Extra over sub-items C3.2.2.1 and C3.2.2.2 for soil cement backfilling			
C3.2.2.4	Extra over sub-items C3.2.2.1 and C3.2.2.2 for screed layers (class of concrete indicated)	m ³	LI	31.68
C3.2.3	Concrete pipe culverts:			
C3.2.3.1	On Class C 100mm bedding sand(concrete pipe 900mm diameter)	m	LI	180.00
C3.2.3.2	On Class C bedding (600 mm dia pipe)	m		Rate only
C3.2.3.3	On Class C bedding (450mm dia pipe)	m		Rate only
C3.2.3.5	Provision of skew ends of pipe culvert	No	LI	3

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Contract No. ZNB02213/00000/00/HOD/INF/23/T

SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

TEM	DESCRIPTION	UNIT	LI	QTY
C3.2.7	Cast in situ concrete and formwork:			
C3.2.7.2	In complete in situ floor slabs for rectangular culverts, manholes and catchpits including formwork, joints and Class U2 surface finish (30Mpa) (installed at a standard depth of 1,0 m)	m3	LI	88.64
C3.2.7.3	In walls, excluding formwork but including Class U2 surface finish (class of concrete indicated)	m3	LI	20.00
C3.2.7.5	In inlet and outlet structures including kerbs, chutes and downpipes, skewed ends, catchpits, manholes, thrust and anchor blocks, excluding formwork but including Class U2 surfacing finish (class of concrete indicated)	m3	LI	32.07
C3.2.7.6	Formwork of concrete under items C3.2.7.3 to 5 above (Class of finish indicated)	m2	LI	92.80
C3.2.10	Reinforcement:			
C3.2.10.3	Welded steel fabric (ref 193)	kg	LI	50
C3.2.16	Brickwork (Engineering bricks):			
C3.2.16.2	230 mm thick	m ²	LI	101
C3.2.19.1	Manhole frames (description and reference to drawing)	No	LI	10
C3.2.19.2	Inlet grids or covers (description and reference to drawing)	No	LI	10
C3.2.24	Compaction of bedding for inlets, outlets, manholes and catchpits:			
C3.2.24.1	Preparation and compaction of in situ bedding material to 90 % of MDD (depth indicated)	m ³	LI	66
C3.2.24.1	Extra-over sub-item C3.2.24.1 for compaction to 93 % of MDD (depth indicated)	m ³	LI	26

THE CONSTRUCTION OF THE NEW MKUZE BRIDGE NO.3801 AT KM 27.440 IN ZULULAND DISTRICT UNDER EMPANGENI REGION.

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SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C3.3	CONCRETE KERBING AND CHANNELING, ASPHALT BERMS, CHUTES, DOWNPIPES, AS WELL AS CONCRETE, STONE PITCHED AND GABION LININGS FOR OPEN DRAINS			
C3.3.2	Concrete kerbing-channeling combination:			
C3.3.2.2	Cast in situ kerbing-channeling (description with reference to drawing and class of concrete and finish indicated)			
	(a) SD0701/A on concrete bedding class 20/19 Mpa	m	LI	750
	(b) SD0703/A on concrete bedding class 20/19 Mpa	no	LI	15
C3.3.3	Extra over items C3.3.1 and C3.3.2 for concrete kerbing or concrete kerbing and channeling on curves			
C3.3.3.1	On curves of radii more than or equal to 5,0 m but less than 20 m	m	LI	50
C3.3.6	Concrete chutes:			
C3.3.6.2	Cast in situ concrete chutes (SD0605/A, Class 20/19MPa, U2 surface finish)	m	LI	80
C3.3.8	Linings for open drains:			
C3.3.8.1	Cast in situ concrete lining (20/19 Mpa concrete lined drain SD0601/C)	m ³	LI	418.00
C3.3.8.2	ClassU2 surface finish to cast in situ concrete (type of open drain indicated)	m ²	LI	350
C3.3.9	Formwork to cast in situ concrete lining for open drains (Class F2 surface finish):			
C3.3.9.1	To sides with formwork on the internal face only	m ²	LI	350
C3.3.9.3	To ends of slabs	m ²		80
C3.3.10	Sealed joints in concrete and stone pitched linings of open drains (sealed with a closed cell expanded polyethylene joint filler over the full panel depth, as per Note 3 on drawing no. SD 0601/C):	m		418

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SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C3.3.12	Reinforcement:			
C3.3.12.3	(a) Welded steel fabric (Ref.193)	kg	LI	250
C3.3.12.4	Other material (specify)	kg		
C3.3.13	Polymer film sheeting (thickness specified) for concrete-lined open drains	m ²	LI	289
C3.3.15	Energy dissipaters in outlet structures			
C3.3.15.1	Precast concrete blocks in outlet structures	No	LI	30
C3.3.15.2	Stones set in outlet structures	m ²	LI	30

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SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C4.1	BORROW MATERIALS			
C4.1.1	Compiling and implementing M&U plans			
C4.1.1.1	For borrow pits (list all borrow pits separately)	No		1
C4.1.4	Removing of the overburden			
C4.1.4.1	In borrow pits	m ³		550
C4.1.5	Excavating of materials in the borrow pits and quarries, material obtained from			
C4.1.5.1	Soft excavation	m ³		138.6
C4.1.5.2	Boulder excavation class A	m ³		59.4
C4.1.6	Providing crushing, screening and related plants			
C4.1.6.2	Two-stage crushing plant	No		1
C4.1.6.4	Screening plant	No		1
C4.1.7.2	Two-stage crushing	m ³		1230.75
C4.1.10	Compacting the floor of the stockpile sites	m ³		1500.00
C4.1.11	Constructing a platform for the stockpile site	m ³		1500
C4.1.12	Stockpiling the material			
C4.1.12.1	Material from a producing plant	m ³		
C4.1.12.2	Material directly from the excavation	m ³		12855.40
C4.1.15.1	Shaping and finishing the borrow pit and quarry areas, and the stockpile sites:			
	(a) Borrow pits (list all borrow pits separately)	ha		0.25

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C4.2	CUT MATERIALS			
C4.2.1	Compiling and implementing M&U plans for the cuttings			
C4.2.1.2	Cuttings exceeding 10 000 m3 up to 20 000 m3	No		2
C4.2.3	Excavating of materials in cuttings, material obtained from			
C4.2.3.1	Soft excavation	m3		3 329
C4.2.3.2	Boulder excavation class A	m3		3 329
C4.2.3.3	Boulder excavation class B	m3		1 665
C4.2.7	Removal of unsuitable stable cut material to spoil			
C4.2.7.1	In layer thicknesses of 200 mm and less	m3	LI	616
C4.2.9	Excavate material to spoil in sites designated by the Contractor, material obtained from			
C4.2.9.1	Soft excavation, overburden and unsuitable material	m3		1814
C4.2.9.2	Boulder excavation class A	m3		1814
C4.2.9.3	Boulder excavation class B	m3		907
C4.2.10	Backfilling of the unavoidable overbreak in hard and boulder excavation			
C4.2.10.1	Compliant gravel material	m3		800
C4.2.12	Finishing the side slopes			
C4.2.12.1	Cuttings:			
	(a) In soft material	m2		1650.00

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C4.4	COMMERCIAL MATERIALS			
C4.4.2	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers			
C4.4.2.1	Pavement layer material:			
	(b) Type G2 material	m ³	LI	720
	(h) Type G6 material	m ³	LI	933
C4.4.2	Commercial materials identified by the Contractor from commercial, private or other non-commercial suppliers			
C4.4.4	Cementitious stabilising agents			
C4.4.4.1	Cement	t	LI	67.76

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C4.5	ALTERNATIVE MATERIALS			
C4.5.1	Additional material investigations			
C4.5.1.1	Cost of sampling and laboratory testing	P/Sum		300000
C4.5.1.2	Handling cost and profit in respect of item C4.5.1.1	%		

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SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C5.1	ROADBED			
C5.1.1	Roadbed construction and compaction			
C5.1.1.1	Compaction of in-situ material to 90% of MDD	m ³		1 584
C5.1.4	Removal of unsuitable material to spoil			
C5.1.4.1	In layer thicknesses of 100mm and less			
	(a) Stable material	m ³		528.00
C5.1.6	Roller-pass compaction			
C5.1.6.6	Pneumatic rollers	m ²		6600.00

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C5.2	FILL			
C5.2.1.2	For fills 1,0 km in length when less than 10 000 m ³	m ³		3918.085
C5.2.2	Fill construction			
C5.2.2.1	Normal fill material in compacted layer thicknesses of 200 mm and less:			
	(b) Compacted to 93% MDD	m3		3918.085
	(c) Roller-pass compaction	m ²		391.8085
C5.2.5	Fill in sidewalk			
C5.2.5.1	Fill material in sidewalk compacted to 93% of MDD (150 mm thickness)	m ³		99.00

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C5.3	ROAD PAVEMENT LAYERS			
C5.3.1	Compiling and implementing M&U plans for the construction of all the pavement layers	No		1
C5.3.2	Construction of pavement layers			
C5.3.2.1	Construction of layers using conventional construction methods:			
	(a) Lower selected subgrade layer (0.15mm) compacted to 93% of MDD	m ³		934
	(c) Upper selected subgrade layer (0.15m layer) compacted to 93% of MDD	m ³		904
	(g) Gravel wearing course layer (0.15m layer thickness) compacted to 95% of MDD	m ³		504
	(k) Upper subbase gravel layer (chemically stabilize layer thickness of 200mm) compacted to 97% of MDD	m ³		1223
	(x) G2 crushed stone base layer (150mm thickness) compacted to 88% of BD	m ³		888

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SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C5.4	STABILISATION			
C5.4.2	Chemical stabilisation			
C5.4.2.1	Chemical stabilisation (200mm layer thickness of pavement layers)	m ³	LI	1 223
C5.4.5.1	Addition of cementitious stabilisation agents (specify agent separately) for pavement layers			
	(a) Cement (for pavement layer)	t	LI	68
C5.4.10	Provision and application of water for curing	kℓ	LI	126

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C8.1 PRIME COAT				
C8.1.1	Prime coat:			
C8.1.1.2	MC - 30 cut-back bitumen	ℓ	LI	2772
C8.1.2	Aggregate for blinding			
C8.1.2.2	Crusher sand	m ³		1 584
C8.1.3	Extra over item C8.1.1 for applying the prime coat accessible only to hand-held or light equipment	ℓ	LI	277

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C9.1	ASPHALT LAYERS			
C9.1.3	Application of bond coat			
C9.1.3.1	Stable grade 30% net bitumen emulsion as specified. Applied with a calibrated distributor	ℓ	LI	400
C9.1.3.2	Applied in restricted areas using a portable pressure sprayer	ℓ	LI	40
C9.1.1	Asphalt mix designs			
C9.1.5	Asphalt surfacing			
C9.1.5.1	New construction			
	(a) Stone skeletal mix - continuously graded as defined (40mm layer thickness 80/100 pen bitumen and 10mm stone)	m ²	LI	5280
C9.1.7	Placing and compacting asphalt in restricted areas			
C9.1.7.1	Extra over payment item C9.1.4.1 and C9.1.5.1 (state layer thickness, mix class, binder type, nominal maximum particle size and placing technique (hand/paver))	m ²	LI	1056
C9.1.13	Coring of asphalt layers			
C9.1.13.1	100 mm diameter	No	LI	85

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C11.1	PITCHING, STONEMWORK, CAST IN SITU CONCRETE FOR PROTECTION AGAINST EROSION			
C11.1.1	Foundation trenches for stone masonry walls			
C11.1.1.1	Excavating foundation trenches in soft material using labour enhanced construction methods 0 m to 1,0 m depth	m ³	LI	30
C11.1.1.2	Excavating foundation trenches in intermediate material using labour enhanced construction methods 0 m to 1,0 m depth	m ³	LI	13
C11.1.2	Stone pitching			
C11.1.2.1	Plain stone pitching			
	(a) Method 1	m ²	LI	99
	(b) Method 2	m ²	LI	59
C11.1.3.4	Filter layer consisting of:			
	(c) Geotextile (According to drawing 3801-49)	m ²	LI	200

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C11.2	NON-STRUCTURAL GABIONS			
C11.2.1	Foundation trench excavation:			
C11.2.1.1	Excavating all material situated within the following depth ranges below the surface level			
	(a) 0 m to 1,5 m	m ³	LI	77
	(b) Exceeding 1,5 m and up to 3,0 m	m ³	LI	110
	(c) Etc, in increments of 1,5 m	m ³	LI	28
C11.2.2	Surface preparation for bedding the gabion boxes and mattresses	m ²	LI	275
C11.2.3	Gabion boxes and mattresses:			
C11.2.3.1	Galvanized gabion boxes ((According to drawing 3801-49)	m ³	LI	528
C11.2.3.3	Galvanized gabion mattresses (According to drawing 3801-49)	m ³	LI	158.40
C11.2.4	Geotextile (Grade B.)	m ²	LI	350.00

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C11.4	ROAD RESTRAINT SYSTEMS			
C11.4.1	Erecting of guardrails at 3,81 m spacing			
C11.4.1.1	Complete galvanized system compliant to SANS 1350:			
	(a) On timber posts (Drawing 3801-41)	m	LI	400
	(c) On concrete or other surfaces, with spacer blocks but without posts (Drawing 3801-41)	m	LI	396
	(d) Extra over C11.4.1.1(a) and C11.4.1.1(c) for excavating holes of posts using labour enhanced methods (soft and intermediate)	m	LI	126
C11.4.1.2	Terminal sections for 3,81 guardrails comprising of:			
	(a)End wings to SANS 1350	No	LI	60
	(b) Bullnoses to SANS 1350	No	LI	45
	(c) Bridge adapters to SANS 1350	No	LI	10
	(d) End treatments where single guardrail sections are specified (Drawing 3801-41)	No	LI	30
	(e) End treatments where double guardrail sections are specified (Drawing 3801-41)	No	LI	15
	(f) Bridge adaptors (including extra rails and posts) (Drawing 3801-41)	No	LI	4
	(g) Extra over C11.4.1.2(d) and C11.4.1.2(e) for excavating holes for posts using labour enhanced methods (soft and intermediate)	No	LI	130
C11.4.3	Project specific concrete barrier systems			
C11.4.3.1	In situ cast concrete barriers	No	LI	164
C11.4.3.2	Precast concrete barriers	No	LI	100

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C11.6	ROAD SIGNS			
C11.6.5	Excavation and backfilling for road sign supports (not applicable to kilometre posts)			
C11.6.5.1	Excavating soft material and backfilling	m ³	LI	250.8
C11.6.5.2	Excavating soft or intermediate material and backfilling using labour enhanced construction methods	m ³		5.016
C11.6.5.3	Extra over item C11.6.5.1 and 2 for cement-treated soil backfill	m ³	LI	50.16
C11.6.8	Danger plates at culverts/structures			
C11.6.8.1	Size 150 x 600 mm (state post type and reflective material)	No	LI	4
C11.6.8.2	Size 200 x 800 mm (state post type and reflective material)	No	LI	2

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SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C11.7	ROAD MARKINGS AND ROAD STUDS			
C11.7.1	Road marking:			
C11.7.1.1	White lines broken or unbroken	km	LI	1.0
C11.7.1.2	Yellow lines broken or unbroken	km	LI	2
C11.7.2.11	Hand painted white lettering and symbols (paint type indicated)	m ²	LI	30
C11.7.7	Road studs			
C11.7.7.1	Permanent road studs compliant to SANS 1442 (type & colours stated)	No	LI	100
C11.7.7.2	Permanent road studs compliant to SANS 1463 (classification & colours stated)	No	LI	100
C11.7.8	Setting out and pre marking the lines (excluding traffic island markings, lettering, and symbols)	km	LI	1
C11.7.9	Re-establishing the painting unit during the defect's notification period and at other instances on instruction of the Engineer	L/Sum	LI	1

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SCHEDULE B: ROADWORKS (for Part F: Small Contractor Development)

SECTION B

ITEM	DESCRIPTION	UNIT	LI	QTY
C11.9	FINISHING THE ROAD AND ROAD RESERVE AND TREATING OLD ROADS			
C11.9.1	Finishing the road and road reserve:			
C11.9.1.1	Dual carriageway road	km	LI	1
C11.9.2	Treatment of old roads and temporary deviations:			
C11.9.2.1	Conventional construction methods	km	LI	2

C3.3 PARTICULAR SPECIFICATIONS

PART G: CIDB CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

G1. SCOPE

This part provides the specifications with regard to 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.

G2. 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 Contractor 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 subcontractors.

G3. REQUIREMENTS

G3.1 CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

G3.1.1 The contractor shall attain or exceed the contract skills development goal OF 0.25% in the performance of the contract or the execution of an order.

G3.1.2 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.

G3.1.3 Where required in terms of the contract or order, the employer shall advise the contractor of the types of training to be undertaken by the learners and candidates based on the needs and requirements of the candidate's qualifications.

G3.2 ACHIEVING THE CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)

G3.2.1 The contractor 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 other 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.

G3.2.2 Employed learners may not account for more than 33 percent of the contract skills development goal.

G3.2.3 Not more than one method may be applied to any individual concurrently in the calculation of the contract skills development goal.

G3.3 CONTRACT SKILLS DEVELOPMENT GOAL CREDITS

G3.3.1 Contract skills development credits will not be awarded for learners enrolled as beneficiaries of other funded or subsidised programmes.

G3.3.2 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 contractor 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.

G3.4 DENIAL OF CREDITS

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

- a) the opportunities not be provided on site or 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 not be 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 not be provided;
 - 3) the required training plan for learners not be provided;
 - 4) the training reports covering a period not be provided;
 - 5) the required records, specified documents and signatures not be 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 not be in accordance with legislative provisions; and
- f) the contractor does not maintain the required training records, or an audit reveals that there is insufficient information to substantiate claims for credits.
- g) the contractor claims credits for learners enrolled as beneficiaries on programmes that are funded or subsidised from another source.
- h) the contractor 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.

G4 COMPLIANCE WITH REQUIREMENTS

G 4.1 GENERAL

G 4.1.1 The contractor shall submit to the employer's representative:

- a) within 30 days of the contract coming into effect or the issuing of an order, a contract compliance baseline training plan taking into account 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.

G4.1.2 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 skills types achieved on the contract; and
- c) the names, ID numbers and period of employment of each learner and
- d) candidate.

G4.1.3 The contractor shall keep records of the hours worked and registration particulars towards compliance with this standard. The contractor shall allow the employer's representative to inspect or audit such training records at any time.

G4.1.4 The employer's representative shall undertake suitable random audits on records to confirm compliance with requirements.

G4.1.5 The learners shall be directly employed by the contractor or SDA. The contractor shall enter into 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

- interms 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 employer or employer's representative.

G4.2 STRUCTURED WORKPLACE LEARNING OPPORTUNITIES FOR LEARNERS

G4.2.1 Structured workplace learning opportunities shall be aligned to the curriculum requirements set for the particular part or full occupational qualification or professional designation for which the learner is registered.

G4.2.2 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.

G4.2.3 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.

G4.2.4 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.

G4.2.5 The contractor shall submit to the employer's representative, 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 into with the learner or the company mentorship agreement entered into 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.

G4.2.6 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.

G4.2.7 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.

G4.3 STRUCTURED WORKPLACE LEARNING FOR CANDIDATES

G4.3.1 Mentoring associated with structured workplace learning for candidates shall be In accordance with the prescripts of the relevant professional body or statutory council.

G4.3.2 The contractor 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.

G4.3.3 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.

G4.3.4 The contractor shall submit to the employer'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 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 into 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.

G4.3.5 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.

G4.3.6 The mentor and supervisor shall sign off all reports and logbooks to allow the candidate to move to other projects or employment and continue on the path towards registration where the work related to the contract ends for whatever reason prior to the candidate gaining sufficient experience for registration.

G5 RECORDS

G5.1 The contractor shall submit all the documentation required in terms of clause 4 in a timely manner and according to a prescribed format where applicable. The contractor shall submit to the Employer's Representative the following proformas:

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

G5.2 The employer'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 employer and shall notify the contractor of this amount.

G5.3 The contractor shall, upon termination of the opportunities provided in order 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 employer's representative for record-keeping purposes.

G5.4 PRO-FORMA DOCUMENTS

The following Annexures are contained at the end of Part G Specifications and shall be used by the contractor in relation to all the reporting requirements.

- Annexure 1 - Form A1 List of Recognised Skills Development Agencies
- Annexure 2 - Form A2 Baseline Training Plan
- Annexure 3 - Form A3 Project Interim Report
- Annexure 4 - Form A4 Supervisor Agreement
- Annexure 5 - Form A5 Project Completion Report

G6 SANCTIONS

G6.1 In the event that the contractor fails to substantiate that any failure to achieve the contract skills development goal was due to reasons beyond the contractor's control which may be acceptable to the employer, the sanctions provided for in the contract shall apply.

G7 MEASUREMENT AND PAYMENT

Item	Unit
G7.01 Payments associated with the Contract Skills Development Goals:	
(a) Employment of Learners employed under Method 1	
(i) Provision for stipends.....	Number (No.)
(ii) Provision for additional Costs	Number (No.)
(b) Employment of Learners employed under Method 2	
(i) Provision for stipends.....	Number (No.)
(ii) Provision for additional Costs	Number (No.)
(c) Employment of Learners 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.)
(e) Liaison with the Employer's project manager and the training service provider:	

(i) Liaison conducted by the Construction Manager.....hour (h)

The payment items under subitem G7.01(a)(i), (b)(i), (c)(i) and (d)(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 Contractor to the participants of the Skills Development Programme, including any associated COIDA and UIF payments, all as authorised by the Employer's Agent.

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

Where an unemployed learner is sourced through an SDA, training provider or skills development facilitator the contractor 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 provisional sum under subitem G7.01(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.

The unit of measurement for subitems G7.01(e)(i) and (ii) shall be the hour. The tendered rates shall include full compensation for all costs related to the Construction for time spent at formal liaison meetings authorised and convened by the Employer's Agent for the specific purpose of liaising with the Employer's project manager and / or the training service provider. The payment shall be made only for the time spent in the formal meeting itself. No payment shall be made for time spent during any other on-site liaison, telephonic liaison, e-mail or written correspondence liaison between these parties, or for liaison conducted with the Employer's project manager and / or the training service provider by any other member of the Contractor's site staff or head office personnel, the cost of all of which shall be deemed to be included in the Contractor's time-related obligations under subitem C1.3.1.3

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 G4.3.

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.

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 G: CIDB CONTRACT SKILLS DEVELOPMENT GOAL (CSDG)
ANNEXURES**

Annexure 1 Form A1 List of Recognised Skills Development Agencies

CIDB Recognised Skills Development Agencies								
No	Name of SDA	SDA Registration Number	Status	Recognition Date End	Province	Contact Person	Contact Number	Email Address
01	CIDB SDA	SDA/ZA/16/00001	Active	01/04/2025	National	Pranveer Harriparsadh	012 482 7230	pranveerh@cidb.org.za
02						Thabelo Ramaru	012 482 7249	thabelor@cidb.org.za
03								
04								

Annexure 2 - Form A2 Baseline Training Plan

CIDB SKILLS STANDARD BASELINE TRAINING PLAN

Contractor Details						
Contractor Name:						
CRS Number:						
Estimated start date						
Estimated Completion date						
Size of Organisation	Small (1-49 employees)	Medium (50-149 employees)	Large (≥ 150 employees)			

Contractor Contact Details	
Name of Contact Person	
Designation of Contact Person	
Contact Details	Cell Number:
	Landline Number:

Contractor Contact Details	
	Email address:

Contract Data				
Project Name				
CIDB Contract Number				
Name of Client:				
Project Description				
Final Tender Sum (at tender award)				
Project Location				
Project duration				
Estimated start date				
Estimated Completion date				
Description	Designation	Project Value	CSDG %	Min CSDG Target
Civil Eng.	CE		0.25	
General Building	GB		0.50	
Civil & General Building	CE & GB		0.375	
Electrical Eng.(Building)	EB		0.25	
Electrical Eng.(Infrastructure)	EP		0.25	
Mechanical Eng.	ME		0.25	
Specialist	SW		0.25	
Total				

Construction Skills Development Goal (CSDG) Baseline Training Plan					
Training Method	Number of Employed Learners	Number of Unemployed Learners	Area/s of Specialisation/Trade	Duration of Placement	Total Notional Cost
Method 1: Skills Programme					
Method 2: FET College Graduates/ Apprenticeship					
Method 3: P1 and P2 learners or a 240 credit qualification					
Method 4: Candidacy with 360 credit qualification					
Total					

Note: Refer to Table 3 in the Standard for Developing Skills through Infrastructure Contracts Government Gazette 43495 of 3 July 2020 for the notional costs

Contractor's Representative Name: _____ Designation: _____

Signature: _____ Date: _____

Employer's Representative Name: _____ Designation: _____

Signature: _____ Date: _____

For Office Use for SDA				
Action	Status			
Project verified on CIDB Register of Projects (RoP)	Yes		No	
Training plans developed	Yes		No	
Appropriate learners available	Yes		No	
Target learners sent to contractor	Yes		No	
SDA processes explained to contractor	Yes		No	
Placement plan developed	Yes		No	
Training Method	Percentage (%) contribution to the CSDG			
Method 1				
Method 2				
Method 3				
Method 4				
Total				

CIDB SDA Contact Person: Mr Pranveer Harriparsadh or Thabelo Ramaru
Email address: pranveerh@cidb.org.za or thabelor@cidb.org.za Tel. 012 482 7230/7249

SDA Representative Name: _____ Designation: _____

Signature: _____ Date: _____

Annexure 4 - Form A4 Supervisor Agreement

Memorandum of understanding between Supervisor and Learner

The Contractor is responsible for the effective management of the learning opportunities provided through the cidb *Standard for the Development of Skills through Infrastructure Contracts* (cidb Skills Standard). The attainment of successful learning outcomes and professional development of the learners is largely dependent on the relationship between the assigned Supervisor and the Learner . As a participant in the implementation of the cidb Skills Standard you agree to the Supervisor relationship and commit to endeavour through the challenges of a construction project to give value to the training programme.

The Responsibilities of a Supervisor to the Learner include:

- stimulating a passion for construction
- sharing technical and practical knowledge
- fostering the development of technical and leadership skills
- facilitating networking within the working community
- instilling an expectation of personal growth and learning by the Learner
- developing knowledge and understanding in the areas of health, safety, environment, quality and production
- inculcating professionalism and a desire for continual improvement by the Learner
- creating a nurturing relationship that instils a sense of discipline and professional pride
- giving constructive feedback and
- signing the Learners logbook.

Supervisor's name _____

Signature:

_____ Date: _____

The Responsibilities of a Learner are:

- adhere to the Host Employer's onsite rules and policies
- have an expectation of personal growth and learning
- to be enthusiastic and motivated
- to be open and accept supervision from the Supervisor and other colleagues

- to develop a thorough understanding of health, safety, environment, quality and production
- to have a positive attitude
- to display a strong sense of discipline and to be conscious of time
- to operate within the team
- to take the time to learn and practice new skills
- to make time to fill in your logbook and obtain the Supervisor's signature for completed tasks

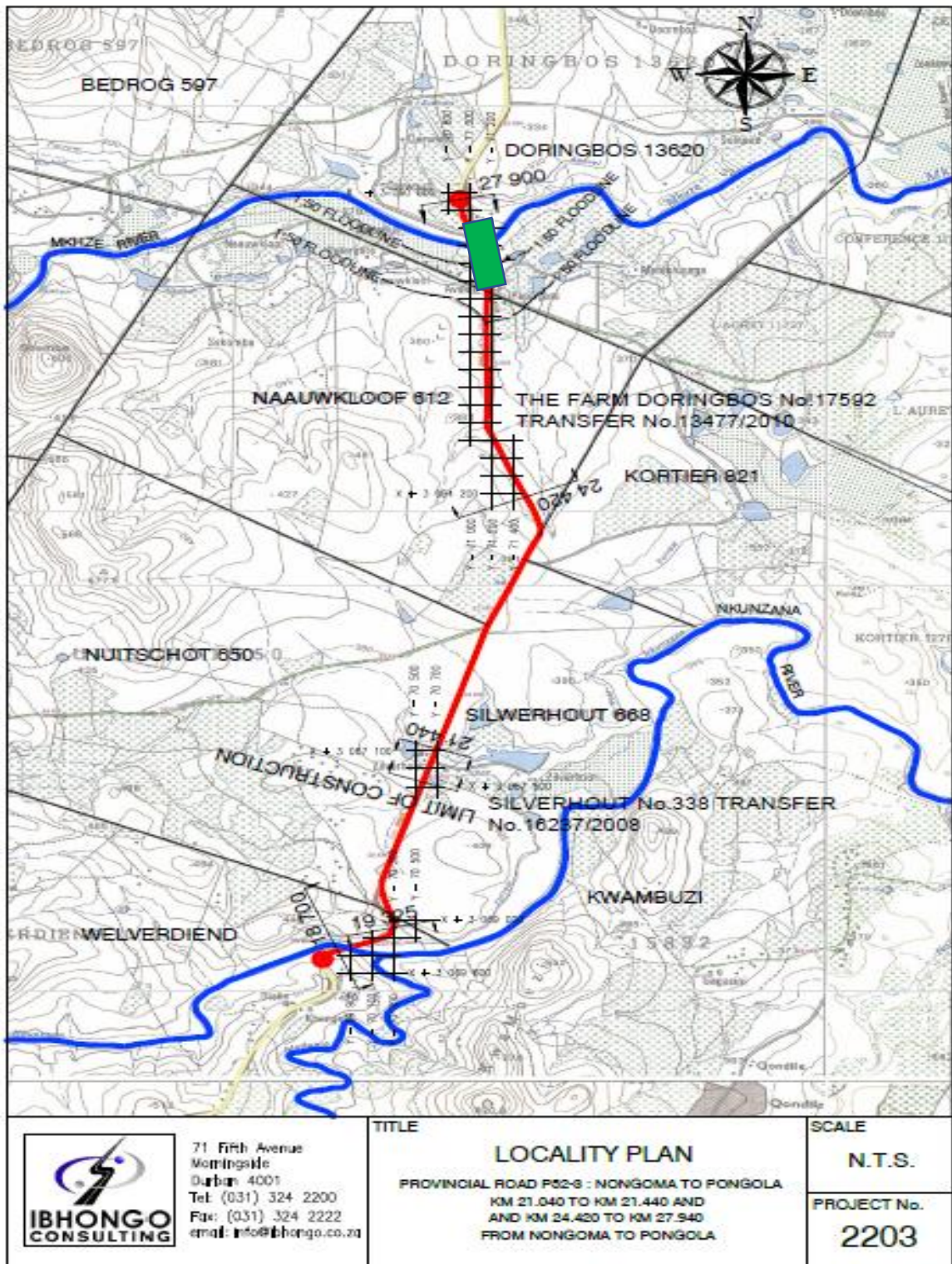
Intern's Name: _____ ID No: _____

Signature: _____ Date: _____

PART C4: SITE INFORMATION

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C4.1 LOCALITY PLAN	C243
C4.2 EXAMPLE OF CONTRACT SIGNBOARD DETAILS	C244
C4.3 EXISTING SERVICES REPORT	C246
C4.4 CONDITIONS ON SITE: MATERIALS INFORMATION	C247
C4.5 TRAFFIC INFORMATION	C252
C4.6 ANY OTHER RELEVANT TECHNICAL REPORTS	C260

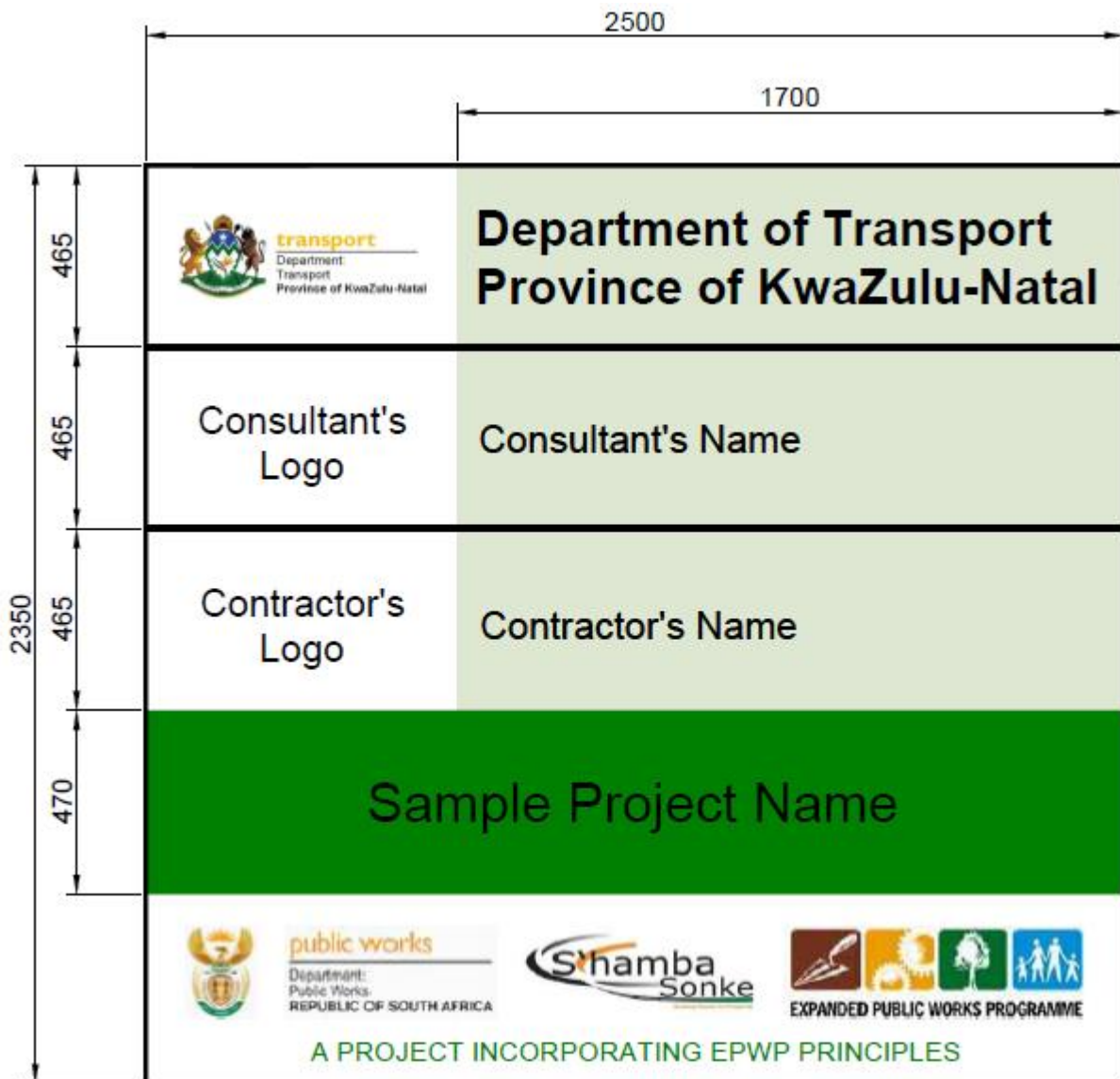
C4.1 LOCALITY PLAN



C4.2 EXAMPLE OF CONTRACT SIGNBOARD DETAILS

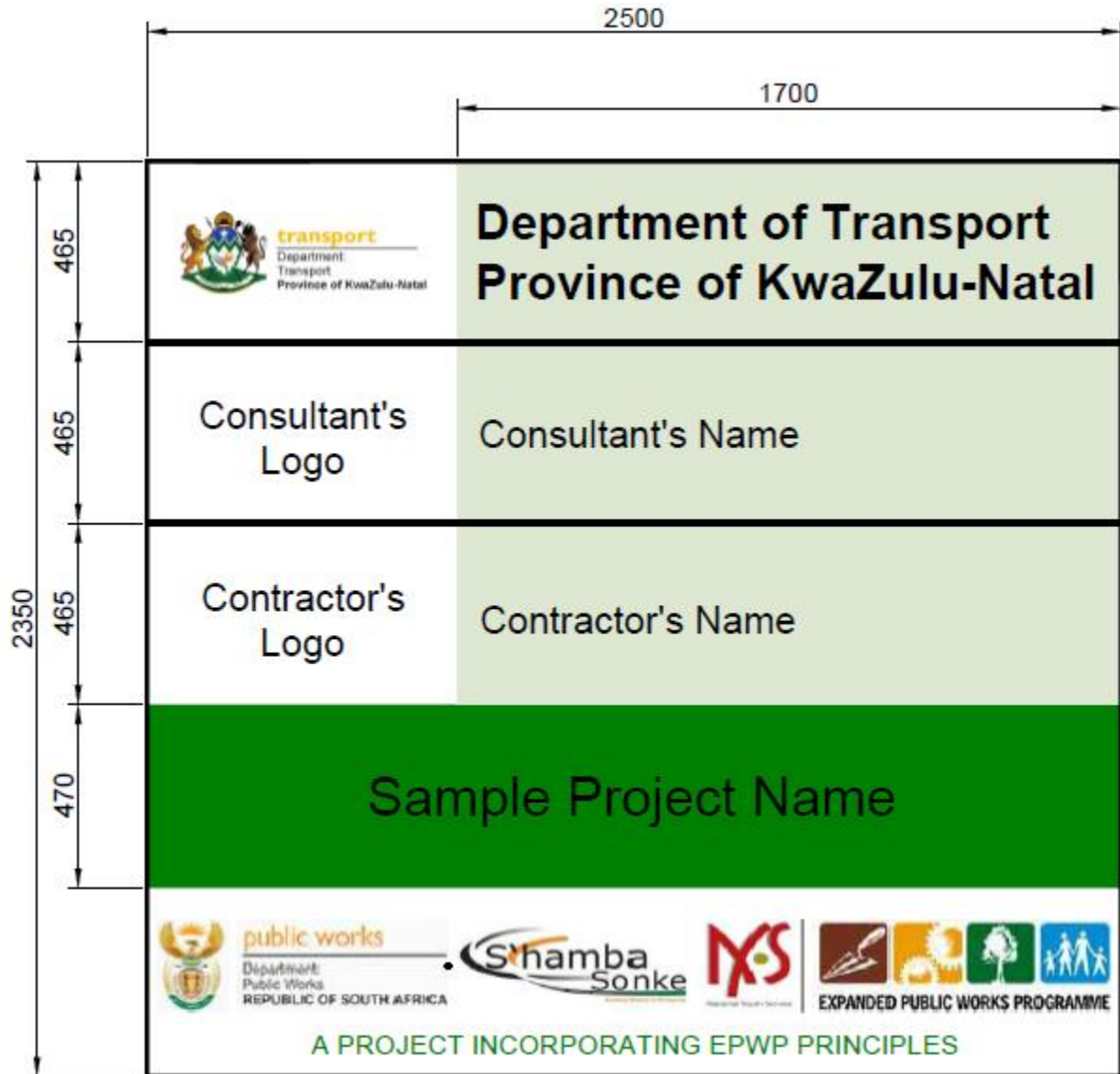
C4.2.1 CONTRACT SIGNBOARD FOR USE WHEN THE NYS PROGRAMME IS NOT REQUIRED:

Note: The “S’hamba Sonke” logo, as indicated below, shall appear on the signboard for Provincial Road Maintenance Grant (PRMG) contracts only. In all other cases it shall be omitted.



C4.2.2 CONTRACT SIGNBOARD FOR USE WHEN THE NYS PROGRAMME IS REQUIRED:

Note: The “S’hamba Sonke” logo, as indicated below, shall appear on the signboard for Provincial Road Maintenance Grant (PRMG) contracts only. In all other cases it shall be omitted.



C4.3 EXISTING SERVICES REPORT

1. Location of services

The new Bridge will be constructed upstream from the existing bridge. There are two graves located on the upstream which has been avoided by the straight section and then a curve approaching Mkuze River bridge. The proposed alignment of the new bridge upstream will also assist in avoiding demolition the community centre downstream, and there are no known or visible services along the new bridges structure which might need location.

It is also expected that unknown buried domestic services crossings requiring relocation or protection may be encountered along the route as the work proceeds. The Contractor shall therefore make every effort to establish the location of any such unknown services in a particular area prior to excavations commencing in that area. Such efforts shall include the Contractor conducting a thorough visual surface inspection for services in the area, and also diligently enquiring of local landowners as to whether there are any known services which have not been shown on the drawings, but which may be affected by the construction activities in that area, and any such services shall be brought to the attention of the Employer's Agent immediately. Exploratory hand excavation trenching work shall be carried out where necessary to establish the exact position of buried services.

The Contractor shall take note of the requirements of clause 1202 of the standard specifications with regard to services.

2. Liaison with service owners

Immediately after the site has been handed over to the Contractor and prior to the commencement of any construction work on the site, the Contractor shall arrange a meeting with the relevant authorities to establish the exact location of the various services affected (if any), to plan the necessary services relocations (if required) and to obtain contact details for the service owners' technical and emergency staff.

Where services relocations are required, the Contractor shall arrange regular planning meetings with the service owners until such time as the services have been relocated and commissioned and the existing services uplifted and removed.

3. Protection of existing services

Prior to the commencement of any construction work on the site, the Contractor shall establish markers at 50 m centres (or closer where necessary), clearly delineating the routes traversed by the services within the road reserve as confirmed by the service owners.

Excavation operations shall commence only after the existing services within or in the near vicinity of the excavations have been suitably protected against damage.

The Contractor shall take particular care when carrying out blasting, pneumatic or mechanical breaking, and general excavation operations in the vicinity of the services, and subcontractors, foremen and plant operators shall be fully briefed on precautionary measures to be taken before excavation commences in these areas.

4. Relocation of services

Should any services need to be relocated, the Contractor shall be required to assist the service owner with programming, organising and carrying out the relocation work, in order to minimise any delays in the construction.

5. Payment for the services relocation work

A provisional sum has been provided under section 1200 of the bill of quantities to cover the costs of any protection, relocation, realignment, removal or replacement of services that may arise.

C4.4 CONDITIONS ON SITE: MATERIALS INFORMATION

CONTENTS	PAGE
C4.4.1 DISCLAIMER	C248
C4.4.2 GENERAL DESCRIPTION OF BRIDGE	C248
C4.4.3 GROUND INVESTIGATION	C248
C4.4.4 GROUND CONDITIONS.....	C249

C4.4.1 DISCLAIMER

The information in this document records the results of investigations done and various tests carried out on materials encountered in the existing road. The results are given in good faith and there is no warranty that the results are entirely representative of all the materials that may be encountered, the intention being to give an indication of the materials likely to be encountered.

No responsibility for any consequence arising from variation between the actual material properties and those indicated in this document will be accepted.

The specification and contract drawings shall always overrule this part of the contract documents.

C4.4.2 GENERAL DESCRIPTION OF BRIDGE

The project is located on P52/3 which provide a more direct link from Nongoma to Magudu and Pongola. The existing bridge to be upgraded is a one directional single lane concrete bridge with a nominal width of 3,5m, 1 direction. This bridge was constructed long time ago, the population growth has significantly resulted in the growth of traffic and the old bridge is not capacited to service the traffic especially being a single directional structure.

The construction of Mkuze River bridge forms the ongoing upgrade of main road P52/3 from gravel to blacktop and the widening of the road to tie to the existing surfaced road at km 27,9. The bridge will be upgraded to a completely new alignment, dual carriage way, concrete bridge and adjacent to the existing bridge upstream. The total length of the new bridge is 180m long, from km 27,360 to km 27,540. There is an allowance of 200m approaches on both end of the bridge from 27.160 to 27.360 and 27.740 to 27.540 to tie with the alignment of P52/3.

It will be supported by the abutments at both ends and 9 piers in between. The total cross-sectional area of the bridge is 13,6 which proceed to the road at the approaches. The lanes are 3.5m width, 1.5m walkway on one side of the bridge and drainage. There are ancillaries at the bridge and on the road approaches which includes the parapet with railing and guardrails, drainage conduits, kerbs, pipes and gabions. This project involves the extensive amount of bulk earthworks at km 24,420 to km 27,740 which will be utilised on the approaches for lower selected and upper selected as well as on fills.

Oscillation Piles were recommended to better improve the ground condition of the site and to withstand the load to be imposed by the new structure. This is however an expensive pile type provided by the specialist service provide and it requires large working platform. These platforms will be constructed to service two opposite sides, a total of 6 platforms will be constructed.

C4.4.3 GROUND INVESTIGATION

Fourteen boreholes were drilled, there are labelled BH1 to BH7 and BH11 to BH17 to the depth ranging between approximately 0.0m to 15.59m. Below the existing ground levels.

C4.4.4 GROUND CONDITIONS

C4.4.4.1 FOUNDATION INVESTIGATION

Fourteen (14 No.) of boreholes to depths ranging between approximately 0.0m and 15.59m below existing ground levels were drilled. There were 3 borehole located within the Mkuze River which were not accessible during the investigation because of the availability of water.

The anticipated founding conditions at the site of the western abutment towards Nongoma, is typically underlain by alluvium and a cobble/boulder horizon overlying Dolerite bedrock at depths ranging between approximately 6.40m and 8.32m below existing ground levels. RQD values become fair from approximately 7.5m to 9.5m below existing ground levels.

The eastern abutment (towards Pongola) is a thick alluvial and boulder/cobble horizon directly overlies Dolerite bedrock, encountered at depths ranging between approximately 9.09m to 10.62m below existing ground levels. RQD values are fair from depths ranging between approximately 11.5m to 12m below existing ground levels.

At the Pier Positions an alluvial and cobble/boulder horizon was found to occur across all the drilled boreholes, which in turn directly overlies competent Dolerite bedrock. Competent Dolerite bedrock was encountered at depths ranging between approximately, 5.2m to 9.05m below existing ground levels. RQD values are fair from depths ranging between approximately 7m to below existing ground levels.

The results of the geotechnical investigation indicate that the proposed new Mkuze Bridge site is likely underlain by a relatively thick alluvium and boulder/cobble horizon with Dolerite bedrock encountered at depths. The Dolerite bedrock was typically encountered at depths ranging between approximately 5.20m and 10.62m below existing ground levels.

It is clear that the founding depths ranging between approximately 5.20m and 10.62m below EGL will require a pile type that can penetrate hard rock dolerite boulders typically 50mm to 500mm diameter and moderately to highly fractured insitu Dolerite bedrock.

It is considered that an Oscillator Piling will best suit pile type which will improve ground conditions and form a rock socket within the less fractured Dolerite bedrock. It is however an expensive pile type requiring a large working platform. The details of this pile type are set out in

ANNEXURE A.

Pile Details	Diameters		
	1080mm	1200mm	1500mm
Typical working load (kN)	6500	8000	13000
Maximum depth (m)	25	25	25
Minimum Pile Spacing (m) (2,5 * diameter)	2,7	3,0	3,75
Maximum rake	1:4	1:4	1:4
Typical main bar reinforcing	15x25mm	15*32mm	18*32mm
Typical spiral reinforcing	8mm	8mm	10mm
Nominal cover to reinforcing	75mm	75mm	75mm
ID of piling tube (mm)	980	1100	1400

The above working loads are based on a shaft stress of 7,5MPa. The pile's tension capacity will obviously depend on the calculated value of shaft friction within the rock socket and the length of the rock socket.

On river bridges the pile excavation is invariably full of water. The concrete has to be placed under water using a tremie pipe. A high slump concrete is used for casting the rock socket and pile shaft as it has to flow down the tremie pipe and then self-compact.

The workability of the concrete is of major importance in the construction of the pile shafts, with temporary liners as concrete which has lost its workability, tends to arch in the pile casing during extraction.

Table below indicates the approximate depths to Dolerite bedrock below existing ground level:

Estimated Depth to Dolerite Bedrock

ANNEXURE B

BH Number	Location	Depth to Bedrock (m)	UCS Depth (m)	UCS (MPa)
1	Left Abutment (N)	8.32	8.45	31.5
2	Left Abutment (Centre)	7.82	8.78	91.5
3	Left Abutment (S)	6.40	*9.69	*98.14
4	Pier P 01 (N)	9.05	*9.42	*56.83
5	Pier P 02 (S)	7.59	8.33	60.4
6	Pier P 03 (N)	8.84	13.36	41.1
7	Pier P 04 (S)	6.60	8.95	44
11	Pier P 06 (N)	5.87	*8.86	*53.26
12	Pier P 07 (S)	8.00	9.77	100.7
13	Pier P 08 (N)	5.20	8.75	100.2
14	Pier P 09 (S)	6.00	9.15	98.5
15	Right Abutment (N)	10.62	-	-
16	Right Abutment (Centre)	9.09	13.3	98.5
17	Right Abutment (S)	10.50	11.82	64

*Point Load Tests conducted due to the smaller LD core ratio of the highly fractured

C4.4.4.2 Crushed stone base

The G2 required for the construction of the crushed stone base shall be obtained from commercial sources.

The nearest commercial sources are Lancaster Crushers near Ulundi and Lafarge at Empangeni (Bay Stone/Ninians).

C4.4.4.3 Concrete and surface seal aggregate, gabion stone and stone for erosion protection works

Crushed stone shall be obtained from commercial source. The nearest commercial sources are Lancaster Crushers near Ulundi and Lafarge at Empangeni (Bay Stone/Ninians).

Test results showed that the grading of the 20,0mm surfacing stone sampled from Lafarge is oversize with respect to the requirements of the Standard Specifications for Road and Bridge Works for South African Road Authorities (COTO), Draft Standard (DS), October 2020.

C4.4.4.4 Natural sand


No specific source of sand was identified. The Contractor will have to make his own arrangements for the procurement of suitable sand for concrete, drainage and other construction purposes from commercial sources.

C4.4.4.5 Water


No specific source of water for construction purposes is identified. The Contractor will have to make his own arrangements in this regard. Water may be available from local rivers and streams but the Contractor will have to make suitable arrangements for access as required as well as for the necessary testing to prove its suitability.

C4.5 TRAFFIC INFORMATION


ANNEXURE C

DC										Traffic										Data																			
The Transport Data Specialists																																							
																																							
Traffic Highlights of Site 020 - P52-3 Site 1																																							
1.1	Site Identifier												020																										
1.2	Site Name												P52-3 Site 1																										
1.3	Site Description												North of L2591																										
1.4	Road Description												-																										
1.5	GPS Position												27 44 34.05"S, 31 421 14.42"E																										
1.6	Number of Lanes												2																										
1.7	Station Type												Temporary																										
1.8	Requested Period												27/01/2020 - 04/02/2020																										
1.9	Length of Record requested (Hours)												192																										
1.1	Actual First and Last Dates												27/01/2020 - 04/02/2020																										
1.1	Actual available good data (Hours)												192																										
1.1	Percentage of Good data available for requested period												100%																										
													to Nongoma										to Pongola			Total													
2.1	Total number of vehicles (counted)												3720										3590			7310													
2.2	Average Daily Traffic (ADT)												413										399			812													
2.3	Average Daily Trucks Traffic (ADTT)												183										41			224													
2.4	Percentage of Trucks												44.2%										10.3%			27.3%													
2.5	Truck split % (short:medium:large)												96.23 %			2.19 %			1.58 %			81.62 %			14.86 %			3.51 %			88.93 %			8.53 %			2.55 %		
2.6	Percentage of night traffic (20:00 - 06:00)												12.96%										10.19%			11.58%													
3.1	Speed Limit (km/hr)																						80																
3.2	Average Speed (km/hr)												48										53			51													
3.3	Average Speed - Light vehicles (km/hr)												47										54			50													
3.4	Average Speed - Heavy vehicles (km/hr)												49										50			49													
3.5	Average Night Speed (km/hr)												45										51			48													
3.6	15th Centile Speed (km/hr)												34										40			37													
3.7	85th Centile Speed (km/hr)												63										67			65													
3.8	Percentage vehicles in excess of speed limit												2.10%										2.81%			2.46%													


4.1	Percentage vehicles in flows over 600 vehicles/hr	0.0%		0.0%	0.0%		
4.2	Highest volume on the road (vehs/hr)	2020/01/31		15:00 - 16:00	94		
4.3	Highest volume to Nongoma (vehs/hr)	2020/01/31		15:00 - 16:00	61		
4.4	Highest volume to Pongola (vehs/hr)	2020/01/29		14:00 - 15:00	48		
4.5	Highest volume in a lane (vehs/hr)	Lane 1	2020/01/31	15:00 - 16:00	61		
4.6	15th Highest volume on the road (vehs/hr)	2020/02/03		14:00 - 15:00	68		
4.7	15th Highest volume to Nongoma (vehs/hr)	2020/01/28		15:00 - 16:00	34		
4.8	15th Highest volume to Pongola (vehs/hr)	2020/02/02		13:00 - 14:00	35		
4.9	30th Highest volume on the road (vehs/hr)	2020/02/01		12:00 - 13:00	55		
4.1	30th Highest volume to Nongoma (vehs/hr)	2020/01/31		21:00 - 22:00	28		
4.1	30th Highest volume to Pongola (vehs/hr)	2020/02/01		17:00 - 18:00	28		
5.1	Percentage of vehicles <2s behind each vehicle ahead	4%		2%			
6.1	Total number of Heavy vehicles	1646		370	2016		
6.2	Estimated average number of axles per truck	2.1		2.6	2.4		
6.3	Estimated Truck mass (Ton/Truck)	11.8		15.0	13.4		
6.4	Estimated average E80/Truck	0.22		0.24	0.23		
6.5	Estimated daily E80 on the road				64		
6.6	Estimated daily E80 in the North direction				52		
6.7	Estimated daily E80 in the South direction				13		
6.8	Estimated daily E80 in the worst North lane				52		
6.9	Estimated daily E80 in the worst South lane				13		
6.1	Assumption on Axles/Truck 0 (Short:Medium:Long)				2	5	7
6.1	Assumption on Mass/Truck 1 (Short:Medium:Long)				10.9	31.5	39.8
6.1	Assumption on E80s/Truck 2 (Short:Medium:Long)				0.6	2.5	2.1

DC										Traffic										Data			
The Transport Data Specialists																							
																							
Traffic Highlights of Site 023 - P52-3 Site 2																							
1.1	Site Identifier								023														
1.2	Site Name								P52-3 Site 2														
1.3	Site Description								North of D124														
1.4	Road Description								-														
1.5	GPS Position								27 42 06.18"S, 31 43 16.27"E														
1.6	Number of Lanes								2														
1.7	Station Type								Temporary														
1.8	Requested Period								27/01/2020 - 04/02/2020														
1.9	Length of Record requested (Hours)								192														
1.1	Actual First and Last Dates								27/01/2020 - 04/02/2020														
1.1	Actual available good data (Hours)								192														
1.1	Percentage of Good data available for requested period								100%														
								to Nongoma							to Pongola							Total	
2.1	Total number of vehicles (counted)								3042							3026							6068
2.2	Average Daily Traffic (ADT)								338							336							674
2.3	Average Daily Trucks Traffic (ADTT)								154							48							202
2.4	Percentage of Trucks								45.6%							14.2%							29.9%
2.5	Truck split % (short:medium:large)								89.39	7.79	2.81	83.02	11.86	5.12	86.21	9.83	3.97						
									% % %			% % %			% % %								
2.6	Percentage of night traffic (20:00 - 06:00)								13.02%							10.05%							11.53%
3.1	Speed Limit (km/hr)								80														
3.2	Average Speed (km/hr)								66							79							73
3.3	Average Speed - Light vehicles (km/hr)								66							80							73
3.4	Average Speed - Heavy vehicles (km/hr)								65							74							67
3.5	Average Night Speed (km/hr)								64							76							70
3.6	15th Centile Speed (km/hr)								54							65							58
3.7	85th Centile Speed (km/hr)								77							94							87
3.8	Percentage vehicles in excess of speed limit								11.01%							46.99%							29.00%
4.1	Percentage vehicles in flows over 600 vehicles/hr								0.0%							0.0%							0.0%

4.2	Highest volume on the road (vehs/hr)	2020/01/31		17:00 - 18:00	84		
4.3	Highest volume to Nongoma (vehs/hr)	2020/01/31		15:00 - 16:00	53		
4.4	Highest volume to Pongola (vehs/hr)	2020/02/02		15:00 - 16:00	46		
4.5	Highest volume in a lane (vehs/hr)	Lane 1	2020/01/31	15:00 - 16:00	53		
4.6	15th Highest volume on the road (vehs/hr)	2020/01/28		14:00 - 15:00	57		
4.7	15th Highest volume to Nongoma (vehs/hr)	2020/01/30		14:00 - 15:00	28		
4.8	15th Highest volume to Pongola (vehs/hr)	2020/02/01		07:00 - 08:00	30		
4.9	30th Highest volume on the road (vehs/hr)	2020/02/03		06:00 - 07:00	48		
4.1 0	30th Highest volume to Nongoma (vehs/hr)	2020/02/02		12:00 - 13:00	23		
4.1 1	30th Highest volume to Pongola (vehs/hr)	2020/01/27		17:00 - 18:00	24		
5.1	Percentage of vehicles <2s behind each vehicle ahead	3%		3%			
6.1	Total number of Heavy vehicles	1386		430	1816		
6.2	Estimated average number of axles per truck	2.4		2.6	2.5		
6.3	Estimated Truck mass (Ton/Truck)	13.3		14.8	14.1		
6.4	Estimated average E80/Truck	0.23		0.24	0.23		
6.5	Estimated daily E80 on the road				60		
6.6	Estimated daily E80 in the North direction				45		
6.7	Estimated daily E80 in the South direction				15		
6.8	Estimated daily E80 in the worst North lane				45		
6.9	Estimated daily E80 in the worst South lane				15		
6.1 0	Assumption on Axles/Truck (Short:Medium:Long)				2	5	7
6.1 1	Assumption on Mass/Truck (Short:Medium:Long)				10.9	31.5	39.8
6.1 2	Assumption on E80s/Truck (Short:Medium:Long)				0.6	2.5	2.1

DC										Traffic										Data					
The Transport Data Specialists																									
																									
Traffic Highlights of Site 026 - P52-3 Site 3																									
1.1	Site Identifier								026																
1.2	Site Name								P52-3 Site 3																
1.3	Site Description								North of D347																
1.4	Road Description								-																
1.5	GPS Position								27 39 56.16"S, 31 43 15.62"E																
1.6	Number of Lanes								2																
1.7	Station Type								Temporary																
1.8	Requested Period								27/01/2020 - 04/02/2020																
1.9	Length of Record requested (Hours)								191																
1.1	Actual First and Last Dates								27/01/2020 - 04/02/2020																
1.1	Actual available good data (Hours)								191																
1.1	Percentage of Good data available for requested period								100%																
								to Nongoma						to Pongola						Total					
2.1	Total number of vehicles (counted)								3390						3305						6695				
2.2	Average Daily Traffic (ADT)								377						367						744				
2.3	Average Daily Trucks Traffic (ADTT)								103						141						244				
2.4	Percentage of Trucks								27.4%						38.4%						32.9%				
2.5	Truck split % (short:medium:large)								84.19 %		11.72 %		4.09 %		89.20 %		8.12 %		2.68 %		86.69 %		9.92 %		3.38 %
2.6	Percentage of night traffic (20:00 - 06:00)								12.42%						9.62%						11.02%				
3.1	Speed Limit (km/hr)								80																
3.2	Average Speed (km/hr)								46						46						46				
3.3	Average Speed - Light vehicles (km/hr)								46						44						45				
3.4	Average Speed - Heavy vehicles (km/hr)								45						49						47				
3.5	Average Night Speed (km/hr)								44						44						44				
3.6	15th Centile Speed (km/hr)								31						30						30				
3.7	85th Centile Speed (km/hr)								61						62						61.6				
3.8	Percentage vehicles in excess of speed limit								1.92%						1.88%						1.90%				
4.1	Percentage vehicles in flows over 600 vehicles/hr								0.0%						0.0%						0.0%				

4.2	Highest volume on the road (vehs/hr)	2020/01/31		16:00 - 17:00	85		
4.3	Highest volume to Nongoma (vehs/hr)	2020/01/31		15:00 - 16:00	54		
4.4	Highest volume to Pongola (vehs/hr)	2020/01/29		14:00 - 15:00	48		
4.5	Highest volume in a lane (vehs/hr)	Lane 1	2020/01/31	15:00 - 16:00	54		
4.6	15th Highest volume on the road (vehs/hr)	2020/02/01		10:00 - 11:00	62		
4.7	15th Highest volume to Nongoma (vehs/hr)	2020/02/02		12:00 - 13:00	31		
4.8	15th Highest volume to Pongola (vehs/hr)	2020/02/02		18:00 - 19:00	33		
4.9	30th Highest volume on the road (vehs/hr)	2020/01/29		08:00 - 09:00	54		
4.1 0	30th Highest volume to Nongoma (vehs/hr)	2020/02/01		18:00 - 19:00	27		
4.1 1	30th Highest volume to Pongola (vehs/hr)	2020/02/03		12:00 - 13:00	27		
5.1	Percentage of vehicles <2s behind each vehicle ahead	3%		2%			
6.1	Total number of Heavy vehicles	930		1268	2198		
6.2	Estimated average number of axles per truck	2.6		2.4	2.5		
6.3	Estimated Truck mass (Ton/Truck)	14.5		13.3	13.9		
6.4	Estimated average E80/Truck	0.24		0.23	0.23		
6.5	Estimated daily E80 on the road				73		
6.6	Estimated daily E80 in the North direction				31		
6.7	Estimated daily E80 in the South direction				42		
6.8	Estimated daily E80 in the worst North lane				31		
6.9	Estimated daily E80 in the worst South lane				42		
6.1 0	Assumption on Axles/Truck (Short:Medium:Long)				2	5	7
6.1 1	Assumption on Mass/Truck (Short:Medium:Long)				10.9	31.5	39.8
6.1 2	Assumption on E80s/Truck (Short:Medium:Long)				0.6	2.5	2.1

DC		Traffic										Data	
The Transport Data Specialists													
Traffic Highlights of Site 028 - P52-3 Site 4													
1.1	Site Identifier	028											
1.2	Site Name	P52-3 Site 4											
1.3	Site Description	North of D565											
1.4	Road Description	-											
1.5	GPS Position	27 38 37.11"S, 31 43 19.97"E											
1.6	Number of Lanes	2											
1.7	Station Type	Temporary											
1.8	Requested Period	27/01/2020 - 04/02/2020											
1.9	Length of Record requested (Hours)	190											
1.10	Actual First and Last Dates	27/01/2020 - 04/02/2020											
1.11	Actual available good data (Hours)	190											
1.12	Percentage of Good data available for requested period	100%											
		to Nongoma			to Pongola			Total					
2.1	Total number of vehicles (counted)	3575			3523			7098					
2.2	Average Daily Traffic (ADT)	397			391			789					
2.3	Average Daily Trucks Traffic (ADTT)	129			44			173					
2.4	Percentage of Trucks	32.4%			11.3%			21.9%					
2.5	Truck split % (short:medium:large)	94.91 %	3.28 %	1.81 %	87.69 %	9.30 %	3.02 %	91.30 %	6.29 %	2.41 %			
2.6	Percentage of night traffic (20:00 - 06:00)	12.39%			9.40%			10.89%					
3.1	Speed Limit (km/hr)											80	
3.2	Average Speed (km/hr)	82			74			78					
3.3	Average Speed - Light vehicles (km/hr)	84			75			79					
3.4	Average Speed - Heavy vehicles (km/hr)	77			67			75					
3.5	Average Night Speed (km/hr)	79			71			75					
3.6	15th Centile Speed (km/hr)	64			57			60					
3.7	85th Centile Speed (km/hr)	101			90			96					
3.8	Percentage vehicles in excess of speed limit	52.76%			35.20%			43.98%					

4.1	Percentage vehicles in flows over 600 vehicles/hr	0.0%		0.0%		0.0%		
4.2	Highest volume on the road (vehs/hr)	2020/01/31		17:00 - 18:00		93		
4.3	Highest volume to Nongoma (vehs/hr)	2020/01/31		15:00 - 16:00		56		
4.4	Highest volume to Pongola (vehs/hr)	2020/02/02		17:00 - 18:00		52		
4.5	Highest volume in a lane (vehs/hr)	Lane 1	2020/01/31	15:00 - 16:00		56		
4.6	15th Highest volume on the road (vehs/hr)	2020/02/02		11:00 - 12:00		67		
4.7	15th Highest volume to Nongoma (vehs/hr)	2020/02/03		15:00 - 16:00		33		
4.8	15th Highest volume to Pongola (vehs/hr)	2020/02/03		06:00 - 07:00		35		
4.9	30th Highest volume on the road (vehs/hr)	2020/01/29		09:00 - 10:00		56		
4.10	30th Highest volume to Nongoma (vehs/hr)	2020/01/27		16:00 - 17:00		28		
4.11	30th Highest volume to Pongola (vehs/hr)	2020/01/29		15:00 - 16:00		29		
5.1	Percentage of vehicles <2s behind each vehicle ahead	4%		4%				
6.1	Total number of Heavy vehicles	1160		398		1558		
6.2	Estimated average number of axles per truck	2.2		2.4		2.3		
6.3	Estimated Truck mass (Ton/Truck)	12.1		13.7		12.9		
6.4	Estimated average E80/Truck	0.22		0.23		0.23		
6.5	Estimated daily E80 on the road					50		
6.6	Estimated daily E80 in the North direction					37		
6.7	Estimated daily E80 in the South direction					13		
6.8	Estimated daily E80 in the worst North lane					37		
6.9	Estimated daily E80 in the worst South lane					13		
6.10	Assumption on Axles/Truck (Short:Medium:Long)					2	5	7
6.11	Assumption on Mass/Truck (Short:Medium:Long)					10.9	31.5	39.8
6.12	Assumption on E80s/Truck (Short:Medium:Long)					0.6	2.5	2.1

C4.6 ANY OTHER RELEVANT TECHNICAL REPORTS

The construction of Mkuze River Bridge for part of the upgrade of P52-3 as the third phase of the project. The construction of a new Mkuze River Bridge located at km 27+440 and it is 200m upstream from existing Mkuze steel bridge. The project entails the piling, construction of nine piers with average height of 9.25m, two abutments and the deck of 13.9m wide inclusive of walkway, kerbing and parapets. The bridge span is 18m, with the total length of 180m.

**ANNEXURE A: GUIDELINES FOR CONSTRUCTION
AND MAINTENANCE PROJECTS DURING COVID-19 LOCKDOWN**



transport

Department:

Transport

Province of KwaZulu-Natal

PROJECT SITE OCCUPATIONAL HEALTH AND SAFETY

GUIDELINES FOR CONSTRUCTION AND MAINTENANCE PROJECTS DURING COVID-19 LOCKDOWN

Revision 1/1 July 2020

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1 INTRODUCTION

Coronavirus Disease 2019 (COVID-19) is a respiratory disease caused by the SARS-CoV-2 virus. In order to reduce the impact of COVID-19 on businesses, workers, customers and the public, the Kwazulu-Natal Department of Transport (KZNDOT), within the parameters of the COVID-19 regulatory framework, want to ensure that all those businesses, workers, customers and public it's interacting with are in compliance to the requirements as stipulated to ensure a safe work-environment for all.

On 23 April 2020, President Cyril Ramaphosa addressed the nation and announced that the country would resume economic activity in a phased approach from 1 May 2020. The lockdown levels depicted by Figure 1 below, will be lifted in phases, level 5 the highest and level 1 being the lowest as depicted below:

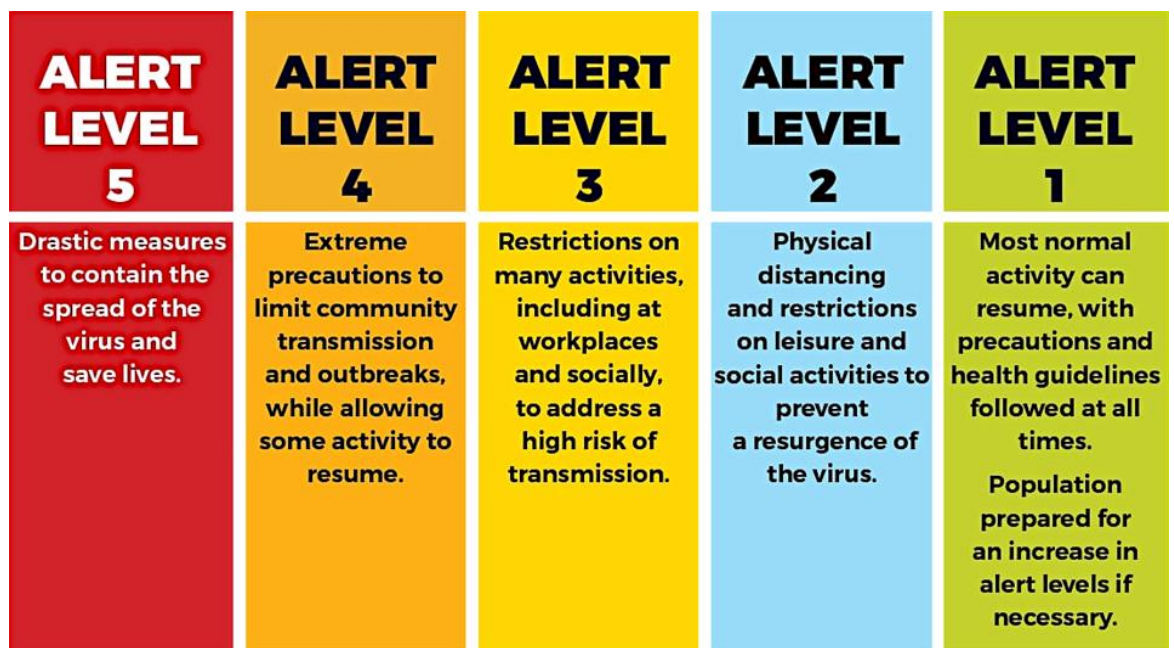


Figure 1: COVID-19 Alert Levels

1.1 BACKGROUND

Occupational Health and Safety are a fundamental segment of the construction industry. Safety must be embedded in all processes, implementing a top down approach, enabling the adoption of a safe and healthy working culture by all. Individual businesses or workplaces must have COVID-19 risk assessments and prevention and mitigation plans in place, and must conduct worker education on COVID-19 and protection measures:

- Identification and protection of vulnerable employees
- Safe transport of employees
- Screening of employees on entering the workplace
- Prevention of viral spread in the workplace
- Hand sanitisers and face masks
- Cleaning of surfaces and shared equipment
- Good ventilation
- Shift arrangements and canteen controls
- Managing sick employees

In addition to the above, monitoring systems must be in place to ensure compliance with safety protocols and to identify infections among employees.

1.2 PURPOSE

This document sets out the key principles and minimum requirements of the KZNDOT that define responsible, healthy and safe operations for road construction related operations working under COVID-19 Lockdown. The present state of the lockdown is geared toward the revival of economic activities and to allow employees involved in permitted services to resume work under certain conditions. This COVID-19 guidance has been developed on the basis of traditional infection prevention and occupational hygiene practices.

1.3 OBJECTIVES

The aims of this document are to:

- Keep workers and the wider public healthy and safe by preventing the spread of COVID-19.
- Apply relevant guidance from the Department of Health, Department of Employment and Labour and other Government Authorities to the construction environment.
- Encourage a safe and respectful work environment and good communication between all stakeholders.
- Sit alongside existing health and safety controls to ensure workers are safe on site.

Contractors and their employees should use this guidance to help identify risk levels on construction sites and to identify any appropriate control measures to be implemented. Additional guidance may be needed as the conditions of the COVID-19 outbreak change and as new information about the virus, its transmission and impact become available. It focuses on, as well as considerations for, the need for contractors to implement engineering, administrative and work practice controls and personal protective equipment (PPE).

2 RISK ASSESSMENT

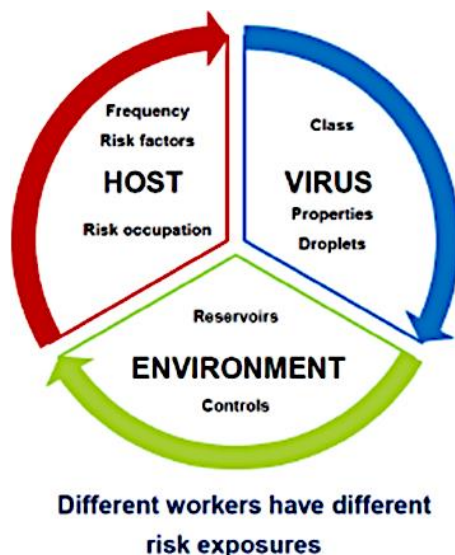


Figure 2: Risk Exposures

The legislation governing workplaces in relation to COVID –19 is the Occupational Health and Safety Act, Act 85 of 1993, as amended, and with the Hazardous Biological Agents Regulations and the Construction Regulation 2014. Section 8(1) of the Occupational Health and Safety Act, Act 85 of 1993, as amended, requires the employer to provide and maintain a working environment that is, to the extent possible reasonably practicable, as amended. Specifically, Section 8(2)(b) requires steps that may be reasonably practicable to eliminate or mitigate any hazard or potential hazard prior to the use of personal protective equipment (PPE).

2.1 BACK TO BASICS

Risk Assessment should be done to determine the **RISK** of **EXPOSURE** and to communicate this to the **WORKERS**.

2.2 IMPLEMENTATION OF CONTROL MEASURES

Before the implementation of control measures, current risk assessments need to be reviewed and updated, taking into account the new hazards posed by exposure to COVID-19 in the workplace. This is in accordance with Section 8 (2) (d) of the OHS Act.

With COVID-19, it may not be possible to eliminate the hazard, the most effective protection measures are engineering controls, administrative controls, safe work practices (a type of administrative control), and Personal Protection Equipment.

Measures for protecting workers from exposure to, and infection with, SARS-CoV-2, the virus that causes Coronavirus Disease 2019 (COVID-19), depend on the type of work being performed and exposure risk, including potential for interaction with people with suspected or confirmed COVID-19 and contamination of the work environment.

Contractors should adapt infection control strategies based on a thorough hazard assessment, using appropriate combinations of engineering and administrative controls, safe work practices, and personal protective equipment (PPE) to prevent worker exposures.

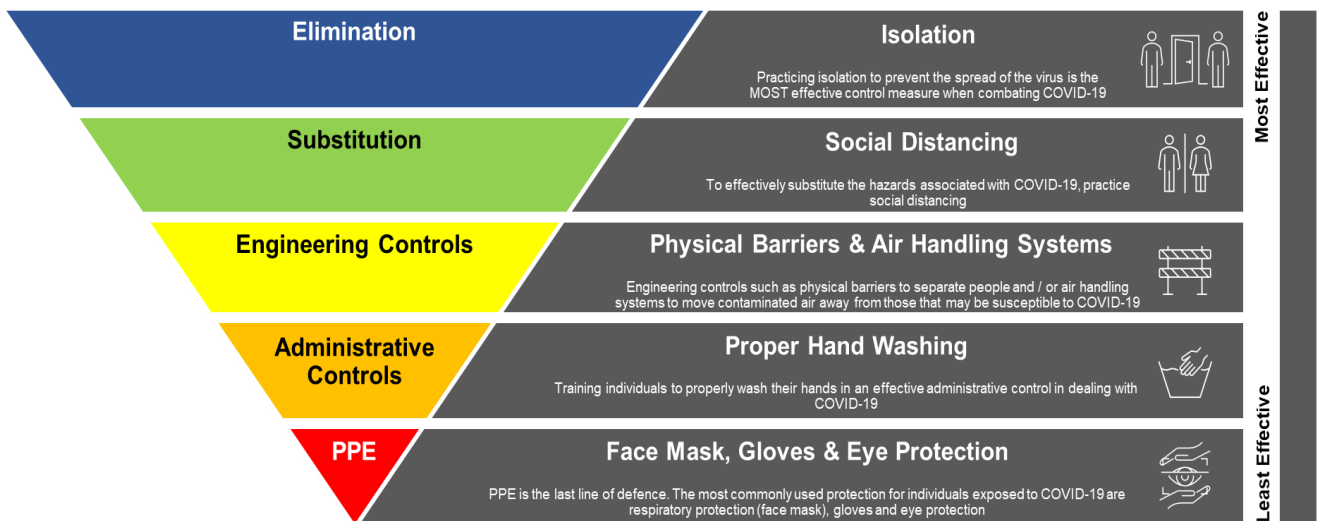


Figure 3: Infection Control Strategies

In preventing occupational exposure to COVID-19 also require Contractors to train workers on elements of infection prevention, including PPE. This would assist Contractors to identify:

- Exposure Levels
- “High Contact” Activities, and
- Vulnerable Workers and Special Measures

Contractors are expected to undertake and champion the principles of constantly focussing on eliminating or reducing the risk of COVID-19 transmission to an acceptable level, engaging meaningfully with their workforce, and making worker health a key priority. A Baseline Risk Assessment is included under Appendix D: COVID-19 Baseline Risk Assessment.

3 SITE OPERATING PROCEDURES

KZNDOT Construction sites operating during the Covid-19 pandemic need to ensure that they protect their workforce and minimise the risk of infection spread. In line with government guidelines on social distancing, this guideline is intended to implement effective steps at all KZNDOT construction sites of any size. These are extraordinary situations, and the KZNDOT intends to abide to the latest COVID-19 advice from national government.

3.1 SELF-ISOLATION

Anyone who meets one of the following criteria should not come to site:

- Has a high temperature or a new persistent cough;
- Is a vulnerable person (by virtue of their age, underlying health condition, clinical condition or pregnancy); or
- Is living with someone in self-isolation or with a vulnerable person.

3.2 IF SOMEONE FALLS ILL

If a worker develops a high temperature or a persistent cough while at work, they should:

- Return home immediately;
- Avoid touching anything; and
- Cough or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and sneeze into the crook or into the bent elbow.

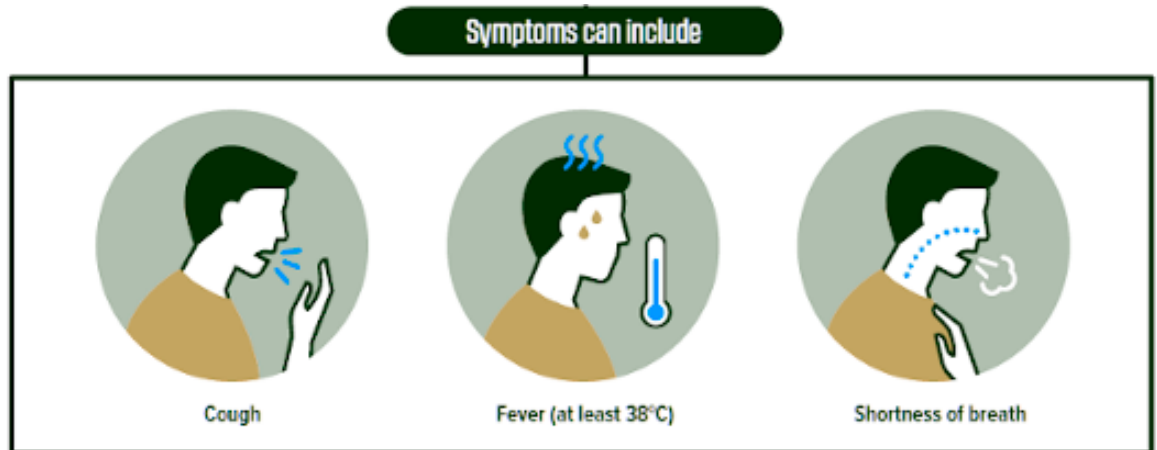


Figure 4: Symptoms of COVID-19

They must self-isolate and not return to work until their period of self-isolation has been completed and his or her negative status has been confirmed.

3.3 TRAVEL TO SITE

Wherever possible workers should travel to site alone using their own transport, and construction sites need to consider:

- Parking arrangements for additional cars, taxis, buses, etc;
- Other means of transport to avoid public transport e.g. cycling;
- They must ensure disinfecting the alternative transport before and after use; and Public Transport Regulations in respect of COVID-19 are adhered to;

- Providing hand cleaning facilities at entrances and exits. This should be soap, water and paper towels (and not fabric towels) wherever possible or hand sanitiser if water is not available; and
- How someone detected vulnerable after screening, taken ill and would get transported home.

3.4 SITE ACCESS POINTS

- Stop all non-essential visitors
- People, be it workers or visitors, without relevant face masks should not be allowed to enter construction sites; and workers should wear face masks at all times.
- Introduce staggered start and finish times to reduce congestion and contact at all times
- Monitor site access points to enable social distancing – you may need to change the number of access points, either increase to reduce congestion or decrease to enable monitoring
- Remove or disable entry systems that require skin contact e.g. fingerprint scanners
- Require all workers to wash or clean their hands before entering or leaving the site or as frequent as possible
- Allow plenty of space (two metres) between people waiting to enter site
- Regularly clean common contact surfaces in Site Office, Access Control and delivery areas e.g. scanners, turnstiles, screens, telephone handsets, desks, particularly during peak flow times
- Reduce the number of people in attendance at site inductions and consider holding them outdoors wherever possible
- Drivers should remain in their vehicles if the load will allow it and must wash or clean their hands before unloading goods and materials.

3.5 HAND WASHING

- Provide additional hand washing facilities to the usual welfare facilities on a large spread out site or significant numbers of personnel on site
- Ensure soap, fresh water and paper towels is always readily available and kept topped up
- Provide hand sanitiser where hand washing facilities are unavailable
- Regularly clean the hand washing facilities and check soap and sanitiser levels
- Provide suitable and enough rubbish bins for hand paper towels with regular removal and disposal.
- Sites will need extra supplies of soap, hand sanitiser and paper towels and these should be securely stored.

3.6 TOILET FACILITIES

- Restrict the number of people using toilet facilities at any one time e.g. use a welfare attendant
- Wash hands before and after using the facilities
- Enhance the cleaning regimes for toilet facilities particularly door handles, locks and the toilet flush handles or buttons
- Portable toilets should be avoided wherever possible, but where in use these should be cleaned and emptied more frequently
- Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal.

3.7 CANTEENS AND EATING ARRANGEMENTS

Whilst there is a requirement for construction sites to provide a means of heating food and making hot drinks, these are exceptional circumstances and where it is not possible to introduce a means of keeping equipment clean between use, kettles, microwaves etc. must be removed from use.

The workforce should also be required to stay on site once they have entered it and not use local shops.

- Dedicated eating areas should be identified on site to reduce food waste and contamination
- Break times should always be staggered to reduce congestion and contact
- Hand cleaning facilities or hand sanitiser should be available at the entrance of any room where people eat and should be used by workers when entering and leaving the area
- The workforce should be asked to bring pre-prepared meals and refillable drinking bottles from home
- Workers should sit 2 metres apart from each other whilst eating and avoid all contact
- Where catering is provided on site, it should provide pre-prepared and wrapped food only
- Crockery, eating utensils, cups etc. should not be used
- Drinking water should be provided with enhanced cleaning measures of the tap mechanism introduced
- Tables should be cleaned between each use
- All rubbish should be put straight in the bin and not left for someone else to clear up
- All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines and payment devices.

3.8 CHANGING FACILITIES, SHOWERS AND DRYING ROOMS

- Always introduce staggered start and finish times to reduce congestion and contact
- Introduce enhanced cleaning of all facilities throughout the day and at the end of each day
- Consider increasing the number or size of facilities available on site if possible
- Based on the size of each facility, determine how many people can use it at any one time to maintain a distance of 1 ½ metres
- Provide suitable and enough rubbish bins in these areas with regular removal and disposal.

3.9 AVOIDING CLOSE WORKING

There will be situations where it is not possible or safe for workers to distance themselves from each other by 1.5 metres.

3.10 GENERAL PRINCIPLES

- Non-essential physical work that requires close contact between workers should not be carried out
- Work requiring skin to skin contact should not be carried out
- Plan all other work to minimise contact between workers
- Re-usable PPE should be thoroughly cleaned after use and not shared between workers
- Single use PPE should be disposed of so that it cannot be reused
- Stairs should be used in preference to lifts or hoists
- Where lifts or hoists must be used:
 - Always lower their capacity to reduce congestion and contact
 - Regularly clean touchpoints, doors, buttons etc.
- Increase ventilation in enclosed spaces
- Regularly clean the inside of vehicle cabs and between use by different operators.

3.11 SITE MEETINGS

- Only absolutely necessary meeting participants should attend
- Attendees should be two metres apart from each other
- Rooms should be well ventilated / windows opened to allow fresh air circulation
- Consider holding meetings in open areas where possible.

3.12 SITE MEETINGS

Enhanced cleaning procedures should be in place across the site, particularly in communal areas and at touch points including:

- Taps and washing facilities
- Toilet flush and seats
- Door handles and push plates
- Handrails on staircases and corridors
- Lift and hoist controls
- Machinery and equipment controls
- Food preparation and eating surfaces
- Telephone equipment
- Keyboards, photocopiers and other office equipment

Rubbish collection and storage points should be increased and emptied regularly throughout and at the end of each day.

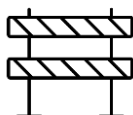
4 CONSTRUCTION PROTOCOLS

The core principle behind this “Construction Protocols” is to protect the health and safety of all workers required to perform duties during the COVID-19 crisis, including related health and safety impacts on operations related to operating under a COVID-19 environment, as well as protecting the wider KwaZulu-Natal population from transmission and spread of the virus.



Before
arriving on
Site

- Each Contractor must have a plan detailing the steps they will take to mitigate risks, including those presented by COVID-19. The details of the plan must be communicated to workers before they start work.
- Before any activity is recommenced the Contractor must ensure that all hazards have been reviewed and appropriately controlled before work activity is commenced after lockdown.
- Where possible, conduct a remote induction before arrival on site, this can be done via video conferencing or by phone.
- If an in-person induction is required, the **Physical Distancing and Hygiene Protocol** must be followed.
- All workers shall undergo a screening process to ensure they are fit for duty by confirming their health status.
- Contractors must understand how workers will travel to and from site and will communicate the **Site Transportation Protocol** to all.
- Ensure all workers understand when additional PPE may be required due to COVID-19 and that workers have access to the correct PPE as per the Department of Employment and Labour guidelines. When required to use face masks or gloves please follow these processes.



Site Entry

- Only relevant personnel to the workplace are to access the site.
- All office employees supporting a project will work remotely, where possible.
- A daily register of workers entering and leaving site must be completed along with a health declaration. Use your existing sign in register or the example Sign-in register.
- Signage reminding workers of the COVID-19 **Physical Distancing and Hygiene Protocol** will be posted at the site entrance and in common areas where appropriate.



Site Operations

- All work is to be undertaken in such a way as to reduce any possible contact between workers and to promote physical distancing wherever possible, as per the **Physical Distancing and Hygiene Protocol**.
- All visitors to the site, such as necessary delivery workers, will be restricted to one person wherever possible. These workers must follow the **Site Transportation Protocol**.
- All offices and jobsites must implement cleaning measures as per the **Cleaning Protocol**.
- All tools, equipment, plant and vehicles must be used in alignment with the **Cleaning Protocol**.
- Toolbox talks should be held with physical distancing in place as per the **Physical Distancing and Hygiene Protocol**.
- Additional sanitary measures are to be implemented on site to prevent the spread of COVID-19 e.g. hand washing stations, provision of additional hand sanitizer, provision of disinfectant wiping products, as per the **Physical Distancing and Hygiene Protocol**.
- Smokers must follow the **Physical Distancing and Hygiene Protocol**.
- A COVID-19 Response plan must be available and accessible on site.



Leaving Site

- Workers must use the sign-in register to sign out.
- When returning home, workers will need to follow the necessary hygiene measures.
- Each site must be cleaned and sanitised at the end of the working day or end of each shift, as per the **Cleaning Protocol**.
- All waste and disposable PPE must be removed from site and securely disposed of as per the **Cleaning Protocol**.
- Workers must follow the **Site Transportation Protocol**.

4.1 PHYSICAL DISTANCING AND HYGIENE PROTOCOL

Physical distancing, also known as “social distancing”, is about keeping a safe distance from others. For physical distancing, at least one and ½ metre’s separation is required at work, and two metres in uncontrolled environments, like in public. This aligns with World Health Organisation advice. We expect one and ½ metre’s separation between people at work as the minimum and greater separation where it is reasonably practicable to do so. This is important to help protect us from COVID-19, which spreads via droplets from coughing and sneezing.

General Working Arrangements

- Keep team sizes as small as possible.
- Keep a record of who is in each team every day as it is required to assist contact tracing.
- Site teams are encouraged to put forward split/alternating shifts to avoid extensive intermingling to reduce potential of exposure.
- Work site is always to be segregated into zones (or by other methods) as much as possible to keep different teams/trades physically separated.
- Where possible, a one-way system in high-traffic areas, such as lifts, stairwells and scaffolds (Where Applicable).
- Where practical, all office employees supporting a project, work remotely.
- When using a vehicle, the **Cleaning Protocol** needs to be followed.
- When using a vehicle, limit this to one/two person per vehicle if possible.





External Interfaces	<ul style="list-style-type: none">• One member of the crew nominated to receive supplies etc.• Keep the engagement with the other person as brief as possible and maintain a two-metre physical distance.• Ask for paperwork to be emailed rather than handed over as much as possible.• If unavoidable, then either wear gloves when handling the item or wash hands before and after handling said items.
Site Entry	<ul style="list-style-type: none">• Limit visitors to site wherever possible.• Introduce staggered start and finish times where possible to reduce congestion and contact.• Monitor site access points to enable physical distancing – you may need to change the number of access points, increase to reduce congestion or decrease to enable monitoring.• Where entry systems that require skin contact, the Cleaning Guide must be followed.• Require all workers to wash or clean their hands before entering and leaving the site.• Allow plenty of space 1½ metres between people waiting to enter site.• Regularly clean common contact surfaces in reception, office, access control and delivery areas e.g. scanners, turnstiles, screens, telephone handsets, desks, particularly during peak flow times.• Where possible, conduct a remote induction before arrival on site, this can be done via video conferencing or by phone. If an in-person induction is required, reduce the number of people and hold them outdoors wherever possible.• Delivery drivers should remain in their vehicles if the load will allow it and must wash or clean their hands before unloading goods and materials.• Any sign in registers should be recorded by one person where possible – do not pass material around the group and minimise contact with any screens.
Site Meetings	<ul style="list-style-type: none">• Only absolutely necessary meeting participants should attend.• Attendees should be two metres apart from each other• Rooms should be well ventilated / windows opened to allow fresh air circulation.• Hold meetings in open areas where possible.• Meetings are to be held through teleconferencing or videoconferencing where possible.
Avoiding Close Working	<ul style="list-style-type: none">• Risk assessments and method statements must be updated to include COVID-19 control measures.• At least 1½ metre's separation is required at work. KZNDOT expect 1½ metre separation between people at work as the minimum and greater separation where it is reasonably practicable to do so.• If it is not possible or safe for workers to distance themselves by one metre for a work activity, the works should not be carried out.• Re-usable PPE should be thoroughly cleaned after use and not shared between workers.• Single use PPE should be disposed of so that it cannot be reused.• Stairs should be used in preference to lifts or hoists.• Where lifts or hoists must be used:<ul style="list-style-type: none">• Lower their capacity to reduce congestion.• Regularly clean touchpoints, doors, buttons etc.• Increase ventilation in enclosed spaces





Toilet Facilities	<ul style="list-style-type: none">• Physical distancing rules apply to the use of shared facilities, including toilets.• Wash hands before and after using the facilities.• Enhance the cleaning regimes for toilet facilities particularly door handles, locks, toilet flush and sanitary bins.• Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal.
Eating Measures	<ul style="list-style-type: none">• If you need to leave site for any reason, follow site entry procedures on return.• Dedicated eating areas should be identified on site to reduce food waste and contamination.• Break times should be staggered to reduce congestion and contact at all times.• Hand cleaning facilities or hand sanitiser should be available at the entrance of any room where people eat and should be used by workers when entering and leaving the area.• The workforce should be asked to bring pre-prepared meals and refillable drinking bottles from home.• Workers should sit 2 metres apart from each other whilst eating and avoid all contact.• Where catering is provided on site, it should provide pre-prepared and wrapped food only.• Shared crockery, eating utensils, cups etc. should not be used.• Tables should be cleaned between each use.• All rubbish should be put straight in the bin and not left for someone else to clear up.• All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles.• Limit access and use of water fountains.• Consider numbers on site for site facilities as physical distancing may require additional space/facilities.
Changing Facilities, Showers and Drying Rooms	<ul style="list-style-type: none">• Introduce staggered start and finish times to reduce congestion and contact at all times.• Introduce enhanced cleaning of all facilities throughout the day and at the end of each day.• Consider increasing the number or size of facilities available on site if possible.• Based on the size of each facility, determine how many people can use it at any one time to maintain a distance of one metre.• Provide suitable and sufficient rubbish bins in these areas with regular removal and disposal.
General Hygiene	<ul style="list-style-type: none">• Each worker must sanitise their hands with hand sanitiser or soap and running water before entry onto site, use warm water if available.• Set up a specific place near the entry of the site for handwashing and/ or sanitising.• Any personal items brought to site by workers must be segregated (kept separate from other workers items).• Individual PPE for workers must be kept separate from other workers PPE and cleaned correctly as per the Cleaning Protocol.• All eating and drinking utensils to be cleaned by the user. Have paper towels accessible to dry.
Smoking	<ul style="list-style-type: none">• Smokers/vapers must use designated area or do so off-site and butts are to be placed in the designated receptacle. Hands must be washed before and after smoking.• Stand so that smoke or vapor produced is not going into another person's breathing zone.





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| Hand Washing | <ul style="list-style-type: none"> • Provide additional hand washing facilities to the usual welfare facilities on large, spread out sites or significant numbers of personnel on site. • Ensure soap and fresh water is readily available and kept topped up at all times. • Provide hand sanitiser where hand washing facilities are unavailable. • Regularly clean the hand washing facilities and check soap and sanitiser levels. • Sites will need extra supplies of soap, hand sanitiser and paper towels and these should be securely stored. |
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4.2 SITE TRANSPORTATION PROTOCOL

Employers are required to have an understanding of how workers will travel to and from site.

Workers travel to site	 Workers are to travel to the site one person per vehicle where possible.
	 Log is to be kept recording who has arrived on site, how they travelled and who they travelled with for contact tracing purposes.
	 Workers must travel home in the same vehicle as they arrived in.
	 Handwashing protocols to be observed before entering site.

Any travel managed by the employer should ensure that adequate steps can be achieved for this transport which includes:	 Allowing for spaces between passengers.
	 Hygienic washing of hands before and after the journey.
	 Follow Vehicle Cleaning Procedures as per the Cleaning Protocols.
	 Restricting equipment and baggage to trailers and or separate parts of the vehicle.

Deliveries to site	 Deliveries to site should be delivered by one person only where possible.
	 Handwashing protocols to be observed once arrived at site.
	 Sign-in register must be completed for persons delivering goods to site.
	 1,5 m physical distancing rules to be applied at all times.

4.3 CLEANING PROTOCOL

Construction Sites operating under Coronavirus COVID-19 Lockdown need to ensure they are protecting their workforce and minimising the risk of spread of infection.

Key Cleaning Tips

All construction sites (offices and jobsites included) should implement additional cleaning measures of common areas to help minimise the spread of COVID-19. Consider your work environment and what is frequently used and touched by workers, customers and others. The virus can be spread from person to person or by touching unclean equipment or surfaces. To stop the spread, focus efforts on cleaning areas where the virus is more likely to spread, such as the kitchen and toilet.

- Schedule regular cleaning.
- Use a suitable cleaning product.
- Use disposable cloths, if available.
- Always wear disposable gloves when cleaning. When finished, place used gloves in a rubbish bin.
- Wear disposable gloves while handling soiled items.
- Wash hands immediately after removing gloves or after handling these items.

Physical distancing should also be practiced when cleaning offices and jobsites. Refer to the **Physical Distancing and Hygiene Protocol** for more information.

Disinfecting Cleaning Aids

Cleaning aids, such as cloths or mops, must be germ-free or they'll spread germs to other surfaces. To help prevent the spread of germs:

- Use disposable cloths or paper towels when possible.
- Reusable cloths should be disinfected or washed after each use.
- Wash brushes in a dishwasher regularly or clean with detergent and warm water after each use.
- Use two buckets for mopping - one for detergent and the other for rinsing.
- Mops and buckets should be cleaned and dried after each use.

Site Cleaning

Before leaving the jobsite at the end of the working day or end of each shift, wipe down any tables/surfaces with soapy water or cleaning agents where possible. All workers must be checked out of site and record kept daily.

Common touch points may include:

- All waste and disposable PPE must be securely disposed of.
- All door handles, railings and personal workstation areas are wiped down with a disinfectant, such as disinfectant wipes. Individuals are responsible for cleaning their workstation area with disinfectant wipes.
- Clean all 'high-touch' surfaces such as desks, counters, tabletops, doorknobs, bathroom fixtures, toilets, light switches, phones, and keyboards every day with antiseptic wipes or disinfectant, including bleach solutions.

Cleaning Bathrooms, Toilets and Showers	<p>Clean toilets with a separate set of cleaning equipment (disposable cleaning cloths, mops, etc).</p> <p>Clean sinks frequently if they're used regularly. If your jobsite has a shower:</p> <ul style="list-style-type: none">• Clean shower trays frequently, if used regularly.• If a shower has not been used for a while, let it run with hot water before using it.• Keep tiles and grout in good condition.• Clean shower curtains frequently. Common toilet touch points may include:• Keep the U-bend and toilet bowl clean by flushing after each use.• Limescale should be regularly removed using a descaling product.• Keep the toilet seat, handle and rim clean by using a disinfectant.
Cleaning Tools and Equipment	<ul style="list-style-type: none">• Clean tools and equipment before and after each day's work with a disinfectant, concentrating on points of contact such as handles.• Wash your hands after handling tools and equipment to prevent the spread of germs.• If possible, don't share tools on-site. If sharing cannot be prevented, take precautions and follow the hand washing guide before and after each use.
Cleaning Vehicles	<ul style="list-style-type: none">• Have dedicated drivers when using vehicles to avoid the spread of germs.• Don't share vehicles if possible, if you need to use a shared vehicle then wipe down the common touched areas of the vehicle after each use (steering wheel, handbrake, gear stick, dashboard, handles, etc) and wash hands before and after using the vehicle.• Wipe down the inside and common touched areas of the vehicle before and after each day.• Have one person per vehicle where possible. If you are required to have more than one person then keep as much distance between people as possible, open the windows to keep air circulating and passengers to face towards the window to reduce the spread of germs.• If you need to have multiple people in a vehicle, then where possible, split teams into groups and stay in those groups when you travel together.
Cleaning PPE	<ul style="list-style-type: none">• Work clothes to be placed in washing machines and clean reusable PPE.• Read and follow directions on the labels of laundry or clothing and detergent. In general, wash and dry laundry and clothing with the warmest temperatures recommended on the label.• When handling soiled laundry wash your hands afterwards. All clothes and towels should be washed with a laundry product to prevent germs from spreading.• Don't leave laundry in the washing machine – any remaining germs can multiply rapidly.
Specialist Clean	<ul style="list-style-type: none">• If a worker is unwell and removed from site, a specialist clean will be completed in the area/ areas identified where the worker was working and has accessed. These areas are to be isolated until a specialist clean has taken place.• All equipment and vehicles used must be cleaned down and disinfected, concentrating on points of contact such as handles, steering wheels etc.

4.4 SCREENING AND MONITORING PROTOCOL

Construction Sites operating under Coronavirus COVID-19 Lockdown need to ensure they are protecting their workforce and minimising the risk of spread of infection. Screening is a method to assess the possibility of employees and visitors who may have symptoms or have been infected with COVID-19. Rigid screening of employees must take place every day before they enter the workplace. This will be the most effective way to control the spread of the virus within the workplace.

Employees should be screened for COVID-19 related symptoms and report such symptoms to a designated person and / or occupational health practitioner prior to entry into the workplace or work area in order for a decision to be made as to the staff member's continued attendance at work.

During Screening	<ul style="list-style-type: none">• At the start of a workday/shift and prior to ending the workday/shift, designated persons and / or occupational health practitioner must check with employees whether they have experienced sudden onset of any of the following symptoms: cough, shortness of breath or fever/chills (or $\geq 38^{\circ}\text{C}$ measured temperature if this is available at the worksite), in the past 24 hours as outlined in Daily Symptom Monitoring Tool.• If an employee reports any of the above-mentioned symptoms, they should immediately be provided with a FFP1 surgical mask and referred to the designated staff at the workplace so that arrangements can be made for COVID-19 testing at the closest testing centre.• If employee report any additional symptoms as outlined in the symptom monitoring sheet, s/he should be provided with a surgical mask and referred to the occupational health clinic, family practitioner or primary care clinic for further clinical evaluation and requirement for COVID-19 testing if indicated.• On receiving their results, the employee and/or health professional supporting the employee should notify their workplace so that the employee is managed accordingly. The workplace should proactively take steps to obtain this information to avoid any delays in reporting.
After isolation or quarantine period	<ul style="list-style-type: none">• Undergo medical evaluation to confirm that they are fit to work• Wearing of surgical masks at all times while at work for a period of 21 days from the initial test• Implement social distancing measures as appropriate (in the case of health workers avoiding contact with severely immunocompromised patients)• Adherence to hand hygiene, respiratory hygiene, and cough etiquette• Continued self-monitoring for symptoms, and seek medical re-evaluation if respiratory symptoms recur or worsen

“**Appendix C: COVID-19 Daily Symptom Monitoring Tool**” is a monitoring Tool to track construction workers on a daily basis for two weeks.

ACRONYMS

PPE	Personal Protective Equipment
WHO	World Health Organization
NICD	National Institute of Communicable Diseases
RR	Residual Risk
OHSA	Occupational Health and Safety Act, 1993 (Act No. 85 of 1993)

KEY TERMS & DEFINITIONS

Contractor	Is defined as a person or company that arranges to supply materials or workers for building or for moving goods.
Extremely Vulnerable Persons	Defined as someone who is solid organ transplant recipients; people with specific cancers: people with cancer who are undergoing active chemotherapy or radical radiotherapy for lung cancer; people with cancers of the blood or bone marrow such as leukaemia, lymphoma or myeloma who are at any stage of treatment; people having immunotherapy or other continuing antibody treatments for cancer; people having other targeted cancer treatments which can affect the immune system, such as protein kinase inhibitors or PARP inhibitors; people who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppressive drugs; People with severe respiratory conditions including all cystic fibrosis, severe asthma and severe COPD; People with rare diseases and inborn errors of metabolism that significantly increase the risk of infections (such as SCID, homozygous sickle cell); People on immunosuppression therapies sufficient to significantly increase risk of infection; Women who are pregnant with significant heart disease, congenital or acquired.)
Physical Distancing	Physical distancing, also known as “social distancing”, is about keeping a safe distance from others.
Safe Work Practices	Safe work practices are types of administrative controls that include procedures for safe and proper work used to reduce the duration, frequency, or intensity of exposure to a hazard.
Screening	Screening is a way for health workers to find out if you may have COVID-19 or not. The health worker will ask you questions and scan your forehead to take your temperature.
Workplace	Workplace means any premises or place where a person performs work.

APPENDIX A: SAFE PRACTICES ON SITE

Using Face Masks on Site



Wash Hands First

Always make sure you wash your hands thoroughly before and after touching a mask.



Masks

There are many kinds of masks, depending on the task.



The Right Side

There is a metal clip at the top of the mask.



Placement

Place the metal clip across the top of your nose.



Attach the Mask

Attach the mask by pulling the elastic bands over your ears.



Stretch Down

Stretch the mask down, so that it covers your chin.



Adjust

Bend the metal clip around your nose so that it sits securely.



Taking off the Mask

Pull the elastic bands away from your ears.



Disposal

Always place the used mask in a closed rubbish bin for secure disposal.

Using Face Masks on Site



Any time you are completing a manual task

Use your usual work safety gloves



If you are cleaning any surfaces

Use disposable gloves for this and throw them in the bin when you finish cleaning



Avoid touching your face while wearing gloves



Remove your gloves and then wash your hands prior to eating, drinking or smoking/vaping



Practice good hand hygiene and good cough and sneeze etiquette while wearing gloves

APPENDIX B: SUSPECTED OR CONFIRMED CASE OF COVID-19

If the suspected or confirmed case of COVID-19 is at work



Isolate

Isolate the person from others and provide a disposable surgical mask, if available, for the person to wear.



Inform

Call (Insert No). Follow the advice of health officials.



Transport

Ensure the person has transport to their home or to a medical facility



Clean

Clean the area where the person was working and all places they have been. This may mean evacuating those areas. Use PPE when cleaning. Identify who at the workplace had close contact with the infected person in the 24 hours before that infected person started showing symptoms. Send those people home to isolate. Allow employees to raise concerns.



Identify



Clean

Clean the area where the person was working and all places they have been. This may mean evacuating those areas. Use PPE when cleaning. Review risk management controls relating to COVID-19 and review whether work may need to change. Keep employees up to date on what is happening.



Review

If the suspected or confirmed case of COVID-19 is not at work when diagnosed



Inform

Call (Insert No). Follow the advice of health officials.



Identify

Identify who at the workplace had close contact with the infected person in the 24 hours before that infected person started showing symptoms. Send those people home to isolate. Allow employees to raise concerns. Clean the area where the person was working and all places they have been. This may mean evacuating those areas. Use PPE when cleaning.



Clean



Review

Review risk management controls relating to COVID-19 and review whether work may need to change. Keep employees up to date on what is happening.

APPENDIX C: COVID-19 DAILY SYMPTOM MONITORING TOOL



COVID-19 DAILY SYMPTOM MONITORING TOOL

Details of Worker				Details of Person completing this form		Date completing form
Identifier	Date of contact	DD/MM/YYYY	Place last contact	Surname	Name	DD/MM/YYYY
Surname	Name			Role	Facility name	
Date of birth	DD/MM/YYYY	Age (Y)	Sex M <input type="checkbox"/> F <input type="checkbox"/>	Email address	Telephone number	
Healthcare worker	Y <input type="checkbox"/> N <input type="checkbox"/>	If yes, facility name		Next of kin details		
Contact number(s)	Email			Next of Kin name and surname	Next of Kin contact number	
Physical address				Suburb	Town	
House number	Street			Patient traced	Y <input type="checkbox"/> N <input type="checkbox"/>	
District	Province			Details of confirmed COVID-19 case (Complete only if Applicable)		
Contact type ¹	Close <input type="checkbox"/> Casual <input type="checkbox"/>	Relationship		Name	Surname	Date of Birth DD/MM/YYYY

Instructions for completion: Mark “Y” if symptom present and “N” if not. If any symptoms are present collect, contact (Insert No) immediately and make immediate arrangements for the collection of a combined nasopharyngeal and oropharyngeal swab. Refer to COVID-19 Quick Guide on the NICD website for additional details. Days post exposure to case.

DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Date (DD/MM)														
Measured body temp														
Chills	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Cough	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Sore throat	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Shortness of breath	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Myalgia/body pains	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N
Diarrhoea ³	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N	<input type="checkbox"/> Y <input type="checkbox"/> N

¹ Close contact: A person having had face-to-face contact (≤2 metres) or was in a closed environment with a COVID-19 case; this includes, amongst others, all persons living in the same household as a COVID-19 case and, people working closely in the same environment as a case. A healthcare worker or other person providing direct care for a COVID-19 case, while not wearing recommended personal protective equipment or PPE (e.g., gowns, gloves, NIOSH-certified disposable N95 respirator, eye protection). A contact in an aircraft sitting within two seats (in any direction) of the COVID-19 case, travel companions or persons providing care, and crew members serving in the section of the aircraft where the index case was seated. Casual contact: Anyone not meeting the definition for a close contact but with possible exposure. ² Chose from: Spouse, Aunt, Child, Class mate, Colleague, Cousin, Father, Friend, Grandfather, Grandmother, Healthcare worker taking care of, Mother, Nephew, Niece, Other relative, Uncle. ³ Diarrhoea defined as three or more loose stools in a 24-hour period.

APPENDIX D: COVID-19 BASELINE RISK ASSESSMENT

					Likelihood						
					Very Unlikely	Unlikely	Possible	Likely	Very Likely		
					Severity	Negligible	1	2	3	4	5
						Minor	2	4	6	8	10
						Moderate	3	6	9	12	15
						Major	4	8	12	16	20
						Extreme	5	10	15	20	25
Hazard	L	S	Risk	Control Measures	L	S	RR	Persons at Risk			
Exposure from others due to: 1. Living with someone with a confirmed case of COVID-19. 2. Have come into close contact (within 2 metres for 15 minutes or more) with a confirmed case of COVID-19. 3. Being advised by a public health authority that contact with a diagnosed case has occurred.				<ul style="list-style-type: none"> To follow government action of self-isolation and only to leave house on the following circumstances: for medical reason; to shop for necessary food supplies; for exercise once per day; and for essential works including those deemed 'key workers' Any existing individual risk assessments (disability, young persons or new / expectant mothers) to be reviewed Maintain contact with line management and Human Resources (HR) and to follow company policy / guidance. Travel is only required for essential travel; reduce the amount of time using public transport and to implement social distancing where possible (2m clearance from persons and not to travel in groups of more than 2 unless it is immediate family) To continue following ongoing government guidance Stay at home and only attend hospital in an emergency. Do not attend GP surgery and phone (Insert No) if further advice is required Company to ensure extremely vulnerable persons are shielding themselves and following their specific medical advice issued to them no later than 29/3/2020 Always follow good hygiene measures Avoid all visitors to your home unless they are providing a medical requirement Do not approach delivery staff, allow packages to be left on the doorstep Do not take any antibiotics as they do not work against viruses. 				Individual Workers			
Suspected case whilst				If a worker develops a high temperature or a persistent cough while at work, they				Individual workers			

					Likelihood						
					Very Unlikely	Unlikely	Possible	Likely	Very Likely		
					Severity	Negligible	1	2	3	4	5
						Minor	2	4	6	8	10
						Moderate	3	6	9	12	15
						Major	4	8	12	16	20
						Extreme	5	10	15	20	25
Hazard	L	S	Risk	Control Measures	L	S	RR	Persons at Risk			
working on site				should: 1. Return home immediately 2. Avoid touching anything 3. Cough or sneeze into a tissue and put it in a bin, or if they do not have tissues, cough and sneeze into the crook of their elbow. 4. They must then follow the guidance on self-isolation and not return to work until their period of self-isolation has been completed.							
General travel including foreign travel				1. Do not travel unless you cannot work from home or deemed a key worker – implement teleconferencing for meetings 2. Where an individual has recently visited these countries, they should self / home isolate themselves until further notice from the government (lockdown measures continue to apply) 3. Please continue to follow any further national government advice provided 4. Where an occupational health (OH) service provider has been appointed, please seek additional advice or concerns through this service 5. All persons to limit their use of public transport. Where travel is essential, please use private single occupancy where possible				Individual workers			
Access / egress to site				Where possible, please consider and implement the following practices: 1. Stop all non-essential visitors 2. Introduce staggered start and finish times to reduce congestion and contact at all times 3. Monitor site access points to enable social distancing – you may need to change the number of access points, either increase to reduce congestion or decrease to enable monitoring 4. Remove or disable entry systems that require skin contact e.g. fingerprint scanners 5. Require all workers to wash or clean their hands before entering or leaving the site				Individual workers			

					Likelihood						
					Very Unlikely	Unlikely	Possible	Likely	Very Likely		
					Severity	Negligible	1	2	3	4	5
						Minor	2	4	6	8	10
						Moderate	3	6	9	12	15
						Major	4	8	12	16	20
						Extreme	5	10	15	20	25
Hazard	L	S	Risk	Control Measures	L	S	RR	Persons at Risk			
				<ol style="list-style-type: none"> Allow plenty of space (two metres) between people waiting to enter site Regularly clean common contact surfaces in reception, office, access control and delivery areas e.g. scanners, turnstiles, screens, telephone handsets, desks, particularly during peak flow times Reduce the number of people in attendance at site inductions and consider holding them outdoors wherever possible Drivers should remain in their vehicles if the load will allow it and must wash or clean their hands before unloading goods and materials. 							
Inclement weather – cold temperature allows disease to survive				<ol style="list-style-type: none"> All persons to dress appropriately for the weather Welfare facilities provided to shelter from the elements Maintain good hygiene measures at all times Appropriate respiratory protective equipment (RPE) masks to be considered as last resort however face fit test (FFT) must be completed to ensure mask effectiveness. It is advised to speak to your H&S competent person on these matters and supplies should be reserved for medical staff as it has been documented that supplies have been difficult to procure 				Individual workers			
Poor hygiene				<ol style="list-style-type: none"> Wash your hands thoroughly and regularly. Use soap and water for at least 20 seconds. Use alcohol-based hand sanitiser if soap and water is not available and hand washing technique to be adopted as directed Avoid touching your face/eyes/nose/mouth with unwashed hands and cover your cough or sneeze with a tissue then throw it in the bin. Provide additional hand washing facilities to the usual welfare facilities if a large spread out site or significant numbers of personnel on site Regularly clean the hand washing facilities and check soap and sanitiser levels Provide suitable and sufficient rubbish bins for hand towels with regular removal and disposal. 				Individual workers			

					Likelihood						
					Very Unlikely	Unlikely	Possible	Likely	Very Likely		
					Severity	Negligible	1	2	3	4	5
						Minor	2	4	6	8	10
						Moderate	3	6	9	12	15
						Major	4	8	12	16	20
						Extreme	5	10	15	20	25
Hazard	L	S	Risk	Control Measures	L	S	RR	Persons at Risk			
				<ol style="list-style-type: none"> 6. Sites will need extra supplies of soap, hand sanitiser and paper towels and these should be securely stored. 7. Restrict the number of people using toilet facilities at any one time e.g. use a welfare attendant. Wash hands before and after using the facilities. Enhance the cleaning regimes for toilet facilities particularly door handles, locks and the toilet flush. Portable toilets should be avoided wherever possible, but where in use these should be cleaned and emptied more frequently. 							
Canteen - exposure from large numbers of persons				<ol style="list-style-type: none"> 1. The workforce should also be required to stay on site once they have entered it and not use local shops. 2. Dedicated eating areas should be identified on site to reduce food waste and contamination 3. Break times should be staggered to reduce congestion and contact at all times 4. Hand cleaning facilities or hand sanitiser should be available at the entrance of any room where people eat and should be used by workers when entering and leaving the area 5. The workforce should be asked to bring pre-prepared meals and refillable drinking bottles from home 6. Workers should sit 2 metres apart from each other whilst eating and avoid all contact 7. Where catering is provided on site, it should provide pre-prepared and wrapped food only - Payments should be taken by contactless card wherever possible and Crockery, eating utensils, cups etc. should not be used 8. Drinking water should be provided with enhanced cleaning measures of the tap mechanism introduced 9. Tables should be cleaned between each use 10. All rubbish should be put straight in the bin and not left for someone else to clear up 				Individual Workers			

					Likelihood						
					Very Unlikely	Unlikely	Possible	Likely	Very Likely		
					Severity	Negligible	1	2	3	4	5
						Minor	2	4	6	8	10
						Moderate	3	6	9	12	15
						Major	4	8	12	16	20
						Extreme	5	10	15	20	25
Hazard	L	S	Risk	Control Measures	L	S	RR	Persons at Risk			
				11. All areas used for eating must be thoroughly cleaned at the end of each break and shift, including chairs, door handles, vending machines and payment devices.							
Use of Changing facilities, showers and drying rooms				<ol style="list-style-type: none"> 1. Introduce staggered start and finish times to reduce congestion and contact at all times 2. Introduce enhanced cleaning of all facilities throughout the day and at the end of each day 3. Consider increasing the number or size of facilities available on site if possible 4. Based on the size of each facility, determine how many people can use it at any one time to maintain a distance of two metres 5. Provide suitable and sufficient rubbish bins in these areas with regular removal and disposal. 				Individual workers			