

**INVITATION TO BID FOR SERVICES**

**LIBS-2016-9125849**

**13 June 2016**

**UNITED NATIONS CHILDREN'S FUND (UNICEF)**

**Wishes to invite you to submit a bid for**

Resurfacing the access road works at UNICEF Afghanistan  
Pre-bid meeting: 20 Jun 2016 @ 10am  
Closing date: 30 Jun 2016 @ 2pm  
Annexes: BoQ, Drawings and SoW

THIS INVITATION TO BID FOR SERVICES HAS BEEN:

Prepared By:




Date: 13, 6, 16

Babrak Hasari

(To be contacted for additional information, NOT FOR SENDING BIDS)

Email : bhasari@unicef.org

Approved By:



14/06/16

Date: \_\_\_\_\_

Emma Maspero

## INVITATION TO BID FOR SERVICES FORM

This FORM must be completed, signed and returned to UNICEF. The Bid must be made in accordance with the instructions contained in this Invitation to Bid for Services (ITBS).

### TERMS AND CONDITIONS OF CONTRACT

Any Contract resulting from this ITBS shall contain UNICEF General Terms and Conditions for Institutional and Corporate Contracts and any other Specific Terms and Conditions detailed in this ITBS.

### INFORMATION

Any request for information regarding this ITBS must be forwarded by email to the person who prepared this document, with specific reference to the ITBS number.

The Undersigned, having read the Terms and Conditions of ITBS No. **LIBS-2016-9125849** set out in the attached document, hereby offers to execute the services specified in this document.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Name & Title: \_\_\_\_\_

Company: \_\_\_\_\_

Postal Address: \_\_\_\_\_

Tel No: \_\_\_\_\_

Fax No: \_\_\_\_\_

E-mail Address: \_\_\_\_\_

Currency of Proposal: \_\_\_\_\_

Validity of Proposal: \_\_\_\_\_

Please indicate which of the following Payment Terms are offered by you:

10 Days 3.0% \_\_\_\_\_ 15 Days 2.5% \_\_\_\_\_ 20 Days 2.0% \_\_\_\_\_ 30 Days Net \_\_\_\_\_ Other \_\_\_\_\_

Other Trade Discounts: \_\_\_\_\_

**Delivery terms : Selected Locations**

Item	Service Description	Quantity	Unit	Unit Price	Price
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**10 Resurfacing the access road**

**SHORT TITLE OF ASSIGNMENT**

Resurfacing the access road inside UNICEF footprint in UNOCA Compound with the estimated measurement of 2,950 sqm. All the measurements related to the asphaltting of the access road are estimated/approximated. The work quantity would be measured at the end of the project and payment would be made based on the actual work completed.

**BACKGROUND**

UNICEF ACO access road from the main road at UNOCA needs resurfacing. The road was not maintained from the time it was constructed initially nor was it repaired.

**OBJECTIVE**

The objective of this project is to repair the access road inside UNICEF Footprint to ease the movement of vehicles and pedestrians.

**SCOPE OF WORK, ACTIVITIES, TASKS, DELIVERABLES AND TIMELINES,**

The resurfacing works include the following but not limited to:

Asphaltting the exiting concrete road (composite pavement)

- # Mobilization and Demobilization
- # Scrap the existing RCC Concretes with machinery;
- # Removal some part of exist concrete road surface layer and compact exist sub base course layer.
- # Supply and pave base course layer with 95% FDT test.
- # Removal and then re-installation of exist PCC curbs in both site of road;
- # Supply and pavement of Asphalt layers (10)cm on exist concrete surface as per drawing section sheets;
- # PCC in front of generator slop area to protect rain water to flow into generator room;
- # Road Marking painting;

Drainage System (concrete ditches)

- # Excavation for ditches and removal of soil out of compound as per drawing;
- # Supply and pave base course layer(10cm) on bed of ditches per as drawing sheet
- # Constructing RCC ditch network to drain the water into purposed three dry wells;
- # Steel Grill ( Angle Iron) 750x750x3mm on top of ditches as per drawing;

Installation of new Electrical Pole around the Main and Program Buildings;

- # Demolition of exist electrical poles;
- # Excavation for laying the electrical cable and its PVC conduit in cluing warning tap and Poles# foundations;
- # Laying the electrical cable and its PVC conduits into ground;
- # Back filling on laid cables canal;
- # Construction of RCC Foundation for electrical poles;
- # Supply and installation of electrical poles as per drawing;

Three Dry Wells

- # Excavation and construction of three dry wells in three different places to absorb the rain and ditches# water;

**MANIMUM QUALIFICATIONS, SPECIALIZED EXPERIENCE AND ADDITIONAL COMPETENCIES REQUIRED**

- # Evidence of registration and license to operate in Afghanistan as a road construction company/ contractor.
- # Minimum of 5 years cognate existence and experience in undertaking construction work. The Company must have experience with projects of similar size and complexity to the project described in the bidding document. They should give clear reference to whether they have had previous experience of working with Reputable Agencies.

## Delivery terms : Selected Locations

Item	Service Description	Quantity	Unit	Unit Price	Price
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- # All applying vendors must attach minimum of three copies of Contracts/ purchase orders /work orders specifying details of similar work done and completed within the past five years. The contracts/ purchase order/ work order should clearly reflect the total value of the contract.
- # Minimum three client references for having successfully undertaken a project of this kind/ Completion Certificates for three Projects
- # A cover letter with a brief of specific project approach and management plan. (Maximum one page).
- # Office location and details including list of machinery and equipment that will be used for the project.
- # Performance Guarantee and Maintenance: The contractor must provide a performance guarantee on the executed scope of work. The methods for implementing and terms of the warranty provisions must be clearly established.
- # List of Technical Staffs that work for the project including the CV.

### CONDITIONS OF WORK

- # Contractor is to work on regular working hours (08:00 AM to 04:00 PM) and if need be for weekend and off hours, it will be done in consultation with the Administration in consultation with the UNOCA security.
- # Payment # Will be upon completion of work and certification by the concerned UNICEF technical person. 10% retention fee will be held as a workmanship guarantee for 9 months from date of completion of the project.

### CRITERIA for CONTRACTORS IN UNOCA COMPOUND DURING CONSTRUCTION

#### SECURITY

- # No any type of weapons such as Gun and Knives allow to bring into UNOCA Compound.
- # All visitors/ workers/machineries should come on time at the gate and must have original ID cards or register number while coming to UNOCA compound and their lists should be sent for approval to Senior Administrative Assistant Mr. Fatah Miakhail on +93798507205 at least 24 hre ago).
- # The contractor is asked to prepare the lists of workers and vehicles, machines on weekly basis.
- # Numbers of workers should not be more than 50 in UNOCA compound under normal circumstance. In case of more than 50 workers, contractor must send email to Mr. Fatah Miakhail at least 24 hrs ago in reason of limitation of Visitor ID Card, Traffic, no enough space in Bankers in urgent/emergency cases and etc.
- # UN does not have any responsibility for equipment or machineries and staff in any cases in UNOCA compound.
- # At the end of the work day, all workers should go together in line towards the gate.
- # The contractor's Project Manager should be at the gate to receive the workers (in addition to escorting guards).
- # The workers should not go out of the construction area until and unless permitted.
- # The supervisor and guards assigned for this project should escort the workers and vehicles from the gate up to the construction site and without escort guards movement is restricted;
- # Broken down of machines or vehicles at the site, Project Manager of contractor should send an email to Senior Administrative Assistant Mr. Fatah Miakhail (afmiakhail@unicef.org ) stating that #This is to confirm that such and such machine or vehicle has been broken down, thus this machine (number etc.) will remain at the work site until it is repaired.
- # In the event of white city days, no one will be allowed to come in; however, on Grey cities depending upon the urgency of works and approval by UNOCA security.
- # No works on Fridays and Saturdays. On exceptional basis, the works can be permitted on Saturdays provided approval from UNOCA security is obtained, so for working in such off days, contractor must send an email to Senior Administrative Assistant Mr. Fatah Miakhail (afmiakhail@unicef.org) stating that #This is to request that works should be ongoing during Saturdays# to have approval from security, otherwise no allowed to work. And it is worth to mention that working during the Saturday (not Holyday) noise, fuss and shouting of workers and machineries not permit and restricted.
- # Time of working in UNICA Compound during the working days is (08:00 Am) till (04:00 Pm) but it is changeable to (7:00 Am) till (05:00 Pm) and time of working during the off day (Saturday) is (08:00 Am) till (04:00 Pm) and no

**Delivery terms : Selected Locations**

Item	Service Description	Quantity	Unit	Unit Price	Price
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more extension.

# Workers must not staring to UN staffs during the work.

# Location of site office or accommodation and store area for materials would be allocated or located by UNICEF.

# Any types of oil such as; Petrol, Diesel or any type of Gas with Balloon are not permitted to bring into UNOCA Compound, so contractor must send list of such equipment#s or materials to Mr. Fatah Miakhail at least 24 hrs ago for approval.

**SAFETY and HEALTHY**

# Safety requirements during construction is highly appreciated and there is full restrict missing of the safety Personal Protection Equipment (PPE) and there is not any extract budget for safety.

# Junk or garbage materials must not be throw everywhere but it should be collected in proper area that allocated and then remove it out of compound.

**QUALIFICATION**

# All project staffs must have full experiences and be qualified in specified project or activities.

**MEETINGS**

# Contractor should officially inform UNICE Engineer about delay of work;

# Weekly meeting of UNICEF and contractor is going to be held in UNICEF meeting room its agenda should be submitted for UNICEF at least 24 Hrs ago.

**LOCATION**

# Project is located on foot print area of UNICEF organization in UNOCA Compound, Jalalabad Road, Kabul-Afghanistan;

**SUMMARY OF WORK**

# Construction RCC ditch around program and on west site of Administration buildings including installation of steel grill on top of RCC ditches in whole length of ditches.

# Asphalt Re-surfacing Road that will be paved on exist RCC concrete pavements.

# Construction of three dry wells or soakage pits which their locations are changeable in accordance with slop of ditches and proper slop of ditches is in accordance with site properties.

# Construction of PCC pavement in front of Generator rooms to stop rain water movement through bed of generators.

Resurfacing the access road

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## SPECIAL NOTES

Instruction to bidder:

A. The bidder shall seal the original and the copy of the bid in two inner envelopes and one outer envelope duly marking the inner envelopes as Original and Copy and all envelopes shall indicate the name and address of the bidder.

B. Bid should be submitted in hardcopy clearly mark the employer address and ITB number to UNICEF Afghanistan Country Office UNOCA Compound, 9th district, Jalalabad Road, Kabul, not later than 1400hrs 30 Jun 2016; late submitted bids, incomplete bid and electronic submitted bids will be rejected; complete bid shall consist of 1. Signed and stamped ITB, priced BoQ & Drawing 2. Company profile, copy of license, list of completed and ongoing projects and references. 3. Bid security

C. Language of Bid is requested in English

D. Currency of Bid should be Afghani other currency bid will be rejected

E. Technical requirement: Implementation schedule, Detail price schedule if any these two documents not provided, the bid will be rejected and will not be process for details evaluation and cost comparison

F. Bidders are allowed to bid for complete project partial bid is not allowed.

G. Time for completion of work is 70 days

H. All interested bidders have to attend the Pre-Bid (site visit) meeting which will held on 20 Jun 2016 @ 10am in UNICEF-ACO; attendance in the pre-bid meeting is mandatory and it will cause for disqualification if not attended # all interested bidders whom wish to attend the pre-bid meeting should e-mail their representative name and national ID or Passport number one day in advance (no later than 1:00pm 19 Jun 2016) to Mr. Babrak Hasari at bhasari@unicef.org and should have their original National ID or Passport while attending the meeting.

I. Bid should be valid for three months; if bid valid for a shorter period shall be rejected by the employer as non-responsive.

J. All received bids will be open in presence of bidders on 30 Jun 2016 at 1430hrs in UNICEF -ACO; bidder participation in bid opening is optional and those whom want to participate should send their representative name, national ID or Passport to above mentioned e-mail address two days in advance.

K. Bid Security: Bidder should submit verifiable bank guarantee for amount of 200,000/AFN in order to deter irresponsible bids and encourage bidders to fulfill the conditions of their bids; bid security (bid bond) shall be:

1. from recognized national bank

2. in accordance with the format and wording as annex -II of this ITB

3. valid up to twenty-eight (28) days beyond the expiry of the bid validity period

UNICEF will release bid securities to unsuccessful bidders upon expiry of the term of the security or formation of a contract with successful bidder, whichever comes first. The bid security of the successful bidder shall not be released, until the required performance security has been received.

L. Performance Security: The successful bidder shall furnish 10% of the total contract value bank guarantee to UNICEF

Annexes:

Annex I: Bill of quantity, drawings and specifications

Annex II: Bid Security form

## SPECIAL TERMS AND CONDITIONS

Technical Specifications to be considered as part of the scope of work is attached as Annex-II

Additional instructions

During the implementation of the project, should there be any other specific technical aspects

not being captured under above instructions or in the drawings, the contractor shall seek advice or approval from UNICEF representative/engineer prior to taking action. Any action taken by the contractor as part of the project implementation, which does not meet the requirements of the project will be rejected, and the contractor shall fully be responsible for such actions.



## UNICEF GENERAL TERMS AND CONDITIONS FOR INSTITUTIONAL/CORPORATE CONTRACTS

### 1. ACKNOWLEDGMENT COPY

Signing and returning the acknowledgment copy of a contract issued by UNICEF or beginning work under that contract shall constitute acceptance of a binding agreement between UNICEF and the Contractor.

### 2. DELIVERY DATE

Delivery Date to be understood as the time the contract work is completed at the location indicated under Delivery Terms.

### 3. PAYMENT TERMS

(a) UNICEF shall, unless otherwise specified in the contract, make payment within 30 days of receipt of the Contractor's invoice which is issued only upon UNICEF's acceptance of the work specified in the contract.

(b) Payment against the invoice referred to above will reflect any discount shown under the payment terms provided payment is made within the period shown in the payment terms of the contract.

(c) The prices shown in the contract cannot be increased except by express written agreement by UNICEF.

### 4. LIMITATION OF EXPENDITURE

No increase in the total liability to UNICEF or in the price of the work resulting from design changes, modifications, or interpretations of the statement of work will be authorized or paid to the contractor unless such changes have been approved by the contracting authority through an amendment to this contract prior to incorporation in the work.

### 5. TAX EXEMPTION

Section 7 of the Convention on the Privileges and Immunities of the United Nations provides, inter alia, that the UN, including its subsidiary organs, is exempt from all direct taxes and is exempt from customs duties in respect of articles imported or exported for its official use. Accordingly, the Vendor authorizes UNICEF to deduct from the Vendor's invoice any amount representing such taxes or duties charged by the Vendor to UNICEF. Payment of such corrected invoice amount shall constitute full payment by UNICEF. In the event any taxing authority refuses to recognize the UN exemption from such taxes, the Vendor shall immediately consult with UNICEF to determine a mutually acceptable procedure.

Accordingly, the Contractor authorizes UNICEF to deduct from the Contractor's invoice any amount representing such taxes, duties, or charges, unless the Contractor has consulted with UNICEF before the payment thereof and UNICEF has, in each instance, specifically authorized the Contractor to pay such taxes, duties or charges under protest. In that event, the Contractor shall provide UNICEF with written evidence that payment of such taxes, duties or charges has been made and appropriately authorized.

### 6. LEGAL STATUS.

The Contractor shall be considered as having the legal status of an independent contractor vis-a-vis UNICEF. The Contractor's personnel and sub-contractors shall not be considered in any respect as being the employees or agents of UNICEF.

### 7. CONTRACTOR'S RESPONSIBILITY FOR EMPLOYEES

The Contractor shall be responsible for the professional and technical competence of its employees and will select, for work under this Contract, reliable individuals who will perform effectively in the implementation of the Contract, respect the local customs and conform to a high standard of moral and ethical conduct.

### 8. INDEMNIFICATION

The Contractor shall indemnify, hold and save harmless and defend, at its own expense, UNICEF, its officials, agents, servants and employees, from and against all suits, claims, demands and liability of any nature or kind, including their costs and expenses, arising out of the acts or omissions of the Contractor or its employees or sub-contractors in the performance of this Contract. This provision shall extend, inter alia, to claims and liability in the nature of workmen's compensation, product liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Contractor, its employees, officers, agents, servants or sub-contractors. The obligations under this Article do not lapse upon termination of this Contract.

### 9. INSURANCE AND LIABILITIES TO THIRD PARTIES

(a) The Contractor shall provide and thereafter maintain insurance against all risks in respect of its property and any equipment used for the execution of this Contract.

(b) The Contractor shall provide and thereafter maintain all appropriate workmen's compensation and liability insurance, or its equivalent, with respect to its employees to cover claims for death, bodily injury or damage to property arising from the execution of this Contract. The Contractor represents that the liability insurance includes sub-contractors.

(c) The Contractor shall also provide and thereafter maintain liability insurance in an adequate amount to cover third party claims for death or bodily injury, or loss of or damage to property, arising from or in connection with the provision of work under this Contract or the operation of any vehicles, boats, airplanes or other equipment owned or leased by the Contractor or its agents, servants, employees or sub-contractors.

## UNICEF GENERAL TERMS AND CONDITIONS FOR INSTITUTIONAL/CORPORATE CONTRACTS

performing work or services in connection with this Contract.

- (d) Except for the workmen's compensation insurance, the insurance policies under this Article shall:
- (i) name UNICEF as additional insured;
  - (ii) include a waiver of subrogation of the Contractor's rights to the insurance carrier against UNICEF;
  - (iii) provide that UNICEF shall receive thirty (30) days written notice from the insurers prior to any cancellation or change of coverage.
  - (iv) The Contractor shall, upon request, provide UNICEF with satisfactory evidence of the insurance required under this Article.

### 10. SOURCE OF INSTRUCTIONS

The Contractor shall neither seek nor accept instructions from any authority external to UNICEF in connection with the performance of its services under this Contract. The Contractor shall refrain from any action which may adversely affect UNICEF or the United Nations and shall fulfil its commitments with the fullest regard to the interests of UNICEF.

### 11. ENCUMBRANCES/LIENS

The Contractor shall not cause or permit any lien, attachment or other encumbrance by any person to be placed on file or to remain on file in any public office or on file with UNICEF against any monies due or to become due for any work done or materials furnished under this Contract, or by reason of any other claim or demand against the Contractor.

### 12. TITLE TO EQUIPMENT

Title to any equipment and supplies which may be furnished by UNICEF shall rest with UNICEF and any such equipment shall be returned to UNICEF at the conclusion of this Contract or when no longer needed by the Contractor. Such equipment when returned to UNICEF shall be in the same condition as when delivered to the Contractor, subject to normal wear and tear.

### 13. COPYRIGHT, PATENTS AND OTHER PROPRIETARY RIGHTS

UNICEF shall be entitled to all intellectual property and other proprietary rights including but not limited to patents, copyrights and trademarks, with regard to documents and other materials which bear a direct relation to or are prepared or collected in consequence or in the course of the execution of this contract. At UNICEF's request, the Contractor shall take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights and transferring them to the UNICEF in compliance with the requirements of the applicable law.

### 14. CONFIDENTIAL NATURE OF DOCUMENTS

- (a) All maps, drawings, photographs, mosaics, plans, reports, recommendations, estimates, documents and all other data compiled by or received by the Contractor under this Contract shall be the property of UNICEF, shall be treated as confidential and shall be delivered only to the UN authorized officials on completion of work under this Contract.
- (b) The Contractor may not communicate any time to any other person, Government or authority external to UNICEF, any information known to it by reason of its association with UNICEF which has not been made public except with the authorization of the UNICEF; nor shall the Contractor at any time use such information to private advantage. These obligations do not lapse upon termination of this Contract with UNICEF.

### 15. FORCE MAJEURE; OTHER CHANGES IN CONDITIONS

- (a) In the event of and as soon as possible after the occurrence of any cause constituting force majeure, the Contractor shall give notice and full particulars in writing to UNICEF of such occurrence or change if the Contractor is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Contract. The Contractor shall also notify UNICEF of any other changes in conditions or the occurrence of any event which interferes or threatens to interfere with its performance of the Contract. On receipt of the notice required under this Article, UNICEF shall take such action as, in its sole discretion, it considers to be appropriate or necessary in the circumstances, including the granting to the Contractor of a reasonable extension of time in which to perform its obligations under the Contract.
- (b) If the Contractor is rendered permanently unable, wholly, or in part, by reason of force majeure to perform its obligations and meet its responsibilities under this Contract, UNICEF shall have the right to suspend or terminate this Contract on the same terms and conditions as are provided for in Article 16, 'Termination', except that the period of notice shall be seven (7) days instead of thirty (30) days.
- (c) Force majeure as used in this Article means acts of God, war (whether declared or not), invasion, revolution, insurrection or other acts of a similar nature or force.

### 16. TERMINATION

If the Contractor fails to deliver any or all of the deliverables within the time period(s) specified in the contract, or fails to perform any of the terms, conditions, or obligations of the contract, or should the Contractor be adjudged bankrupt, or be liquidated or become insolvent, or should the contractor make an assignment for the benefit of its creditors, or should a Receiver be appointed on account of the insolvency of the contractor, UNICEF may, without prejudice to any other right or remedy it may have under the terms of these conditions, terminate the Contract,

## UNICEF GENERAL TERMS AND CONDITIONS FOR INSTITUTIONAL/CORPORATE CONTRACTS

forthwith, in whole or in part, upon thirty (30) days notice to the Contractor.

UNICEF reserves the right to terminate without cause this Contract at any time upon thirty (30) days prior written notice to the Contractor, in which case UNICEF shall reimburse the Contractor for all reasonable costs incurred by the Contractor prior to receipt of the notice of termination.

In the event of any termination no payment shall be due from UNICEF to the Contractor except for work and services satisfactorily performed in conformity with the express terms of this contract.

Upon the giving of such notice, the Contractor shall have no claim for any further payment, but shall remain liable to UNICEF for reasonable loss or damage which may be suffered by UNICEF for reason of the default. The Contractor shall not be liable for any loss or damage if the failure to perform the contract arises out of force majeure.

Upon termination of the contract, UNICEF may require the contractor to deliver any finished work which has not been delivered and accepted, prior to such termination and any materials or work-in-process related specifically to this contract. Subject to the deduction of any claim UNICEF may have arising out of this contract or termination, UNICEF will pay the value of all such finished work delivered and accepted by UNICEF.

The initiation of arbitral proceedings in accordance with Article 22 'Settlement of Disputes' below shall not be deemed a termination of this Contract.

### 17. SUB-CONTRACTING

In the event the Contractor requires the services of subcontractors, the Contractor shall obtain the prior written approval and clearance of UNICEF for all sub-contractors. The approval of UNICEF of a sub-contractor shall not relieve the Contractor of any of its obligations under this Contract. The terms of any sub-contract shall be subject to and in conformity with the provisions of this Contract.

### 18. ASSIGNMENT AND INSOLVENCY

a. The Contractor shall not, except after obtaining the written consent of UNICEF, assign, transfer, pledge or make other dispositions of the Contract, or any part thereof, of the Contractor's rights or obligations under the Contract.

b. Should the Contractor become insolvent or should control of the Contractor change by virtue of insolvency, UNICEF may, without prejudice to any other rights or remedies, terminate the Contract by giving the Contractor written notice of termination.

### 19. USE OF UNITED NATIONS AND UNICEF NAME AND EMBLEM

The Contractor shall not use the name, emblem or official seal of the United Nations or UNICEF or any abbreviation of these names for any purpose.

### 20. OFFICIALS NOT TO BENEFIT

The Contractor warrants that no official of UNICEF or the United Nations has received or will be offered by the Contractor any direct or indirect benefit arising from this Contract or the award thereof. The Contractor agrees that breach of this provision is a breach of an essential term of the Contract.

### 21. PROHIBITION ON ADVERTISING

The Contractor shall not advertise or otherwise make public that the Vendor is furnishing goods or services to UNICEF without specific permission of UNICEF.

### 22. SETTLEMENT OF DISPUTES

#### Amicable Settlement

The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of, or relating to this Contract or the breach, termination or invalidity thereof. Where the parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then obtaining, or according to such other procedure as may be agreed between the parties.

#### Arbitration

Any dispute, controversy or claim between the Parties arising out of this Contract or the breach, termination or invalidity thereof, unless settled amicably under the preceding paragraph of this Article within sixty (60) days after receipt by one Party or the other Party's request for such amicable settlement, shall be referred by either Party to arbitration in accordance with the UNCITRAL Arbitration Rules then obtaining. The arbitral tribunal shall have no authority to award punitive damages. In addition, the arbitral tribunal shall have no authority to award interest in excess of six percent (6%) and any such interest shall be simple interest only. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy, claim or dispute.

### 23. PRIVILEGES AND IMMUNITIES

The privileges and immunities of the UN, including its subsidiary organs, are not waived.

## UNICEF GENERAL TERMS AND CONDITIONS FOR INSTITUTIONAL/CORPORATE CONTRACTS

### 24. CHILD LABOUR

UNICEF fully subscribes to the Convention on the Rights of the Child and draws the attention of potential suppliers to Article 32 of the Convention which inter alia requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development.

### 25. ANTI-PERSONNEL MINES

UNICEF supports an international ban on the manufacture of anti-personnel mines. Anti-personnel mines have killed and maimed thousands of people, of whom a large proportion are children and women. Anti-personnel mines present a serious obstacle to the return of populations displaced from their residences by fighting around their villages and homes. UNICEF has, therefore, decided not to purchase products from companies that sell or manufacture anti-personnel mines or their components.

### 26. AUTHORITY TO MODIFY

No modification or change in this Contract, no waiver of any of its provisions or any additional contractual relationship of any kind with the Contractor shall be valid and enforceable against UNICEF unless provided by an amendment to this Contract signed by the authorized official of UNICEF.

### 27. REPLACEMENT OF PERSONNEL

UNICEF reserves the right to request the Contractor to replace the assigned personnel if they are not performing to a level that UNICEF considers satisfactory. After written notification, the Contractor will provide curriculum vitae of appropriate candidates within three (3) working days for UNICEF review and approval. The Contractor must replace the unsatisfactory personnel within seven (7) working days of UNICEF's selection.

If one or more key personnel become unavailable, for any reason, for work under the contract, the Contractor shall (i) notify the project authority at least fourteen (14) days in advance, and (ii) obtain the project authority's approval prior to making any substitution of key personnel. Key personnel are designated as follows:

- (a) Personnel identified in the proposal as key individuals (as a minimum, partners, managers, senior auditors) to be assigned for participation in the performance of the contract.
- (b) Personnel whose resumes were submitted with the proposal; and
- (c) Individuals who are designated as key personnel by agreement of the Contractor and UNICEF during negotiations.

In notifying the project authority, the Contractor shall provide an explanation of circumstances necessitating the proposed replacement(s) and submit justification and qualification of replacement personnel in sufficient detail to permit evaluation of the impact on the engagement.

Acceptance of a replacement person by the project authority shall not relieve the Contractor from responsibility for failure to meet the requirements of the contract.



# **TECHNICAL SPECIFICATION FOR ASPHALT ROAD CONSTRUCTION**

**Issued for Tender Only**

**Kabul - Afghanistan**

May, 23 2016



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## **Part 1. CLEARING AND EARTHWORKS**

### **General Requirement for Earthworks**

The Contractor is required to take particular note of the specifications for the compaction of earthworks. Details of compaction control are discussed in paragraph 2.0.3 below and the testing of embankment earthworks will require particular care.

In order to achieve the specified compaction, the Contractor shall carefully control the moisture content of the embankment material. For some sections of the works to achieve this end the Contractor may have to construct bunds and carry out dewatering. No separate payment shall be made for such ring bunds or for dewatering or for watering when necessary and the Contractor shall have allowed for the cost thereof by including that cost in the unit rate tendered for roadway embankment.

The Contractor shall program the works so that existing embankment materials are re-used to the maximum extent possible under the Specifications and the measures necessary to reduce the moisture content of materials with high moisture content values but which are otherwise suitable for incorporation in the embankment shall be included in the tendered rates.

The earthworks quantities given in the Bills-of-Quantities are approximate only and the Contractor shall be paid according to the relevant items of the Bills-of-Quantities for the actual quantities of work performed in accordance with the Specifications.

### **Demolition of Structures**

This item shall include demolition of structures within the right of-way required to complete the works. Demolition, unless otherwise specifically directed by the Engineer, shall be complete including foundations but not including caissons below ground level. No demolition work shall be carried out without the prior written approval of the Engineer.

### **Removal of Exist Pavements**

This item shall consist of the removal of existing pavement (flexible or rigid) including base course as applicable and the satisfactory disposal of materials removed.

Since the works to be carried out under the Contract are for the overlay/betterment of the existing road the work under this item shall normally involve only the removal of bituminous wearing courses and concrete pavement slabs.

### **Removal of Top Soil**

All topsoil encountered during required excavation shall be removed and stored in stockpiles at locations approved by the Engineer for later use in accordance with the requirements of these specifications.

### **Inspection of Excavations**

After each excavation is completed and before the foundation is covered, the Contractor shall notify the Engineer and no material shall be placed until the Engineer has approved the condition of the foundation and its depth and has given permission to proceed.

### **Site Cleaning**

During construction of any feature of Works (FOW) site cleaning is the contractor's responsibilities to clean and remove all the extra materials or disposal materials from construction site.

## Part 2. SOIL/AGGREGATE PAVEMENT

### Description

This item shall consist of a compacted aggregate base course constructed in accordance with the requirements hereinafter set forth and in conformity with the lines, grades and cross sections shown on the Drawings and approved by the Engineer.

Finished base course levels shall be determined following the choice of horizontal and vertical alignments for the new road pavement. The base course shall be constructed, with variable thickness where necessary, to the lines and levels directed by the Engineer.

### Material

Materials for this course shall be sound, durable crushed rock, crushed slag, crushed boulder. The materials shall be uniformly blended by mixing predetermined quantities of coarse and fine aggregate and at the time of compaction the moisture content shall be plus or minus two percent of the optimum moisture content. The aggregate shall meet the grading B, C or D of AASHTO standard Specification M147-65. The fraction passing the 0.075 mm sieve shall be not more than one thirds of the fraction passing the 0.425 mm sieve.

AASHTO Standard Specification Designation M147-65  
Table 2-1

Sieve Designation mm	Percentage by mass passing square mesh sieve					
	Grading A	Grading B	Grading C	Grading D	Grading E	Grading F
50	100	100				
25		75-95	100	100	100	100
9.5	30-65	40-75	50-85	60-100		
4.75	25-55	30-60	35-65	50-85	55-100	70-100
2.0	15-40	20-45	25-50	40-70	40-100	55-100
0.425	8-20	15-30	15-30	25-45	20-50	30-7-
0.075	2-8	5-20	5-15	5-20	6-20	8-25

## **Construction Method**

Any ruts, holes, defects or soft yielding places which occur in the subbase by reason of any improper drainage condition, traffic or hauling over the same, or for any other cause, shall be corrected and compacted to required density and stability and shall comply with the smoothness requirements of the Specification before aggregate base course is placed thereon.

## **Test**

Before commencing the work, the Contractor shall furnish to the Engineer, a sufficient quantity of the materials intended for use in order that the Engineer can determine the maximum dry density in accordance with AASHTO T-180 (Method D). The density requirement for the project shall be at least 98% of the maximum dry density determined by the Engineer.

Field test for density shall be in accordance with AASHTO T-191 or as otherwise approved by the Engineer and shall be carried out by the Contractor at a rate of at least one per 250 sqm of compacted base course.

## **Part 3. BITUMINOUS PAVEMENT**

### **Materials**

All materials shall be tested by the Contractor in the presence of the Engineer's representative at the Site except where manufacturer's test certificates are supplied and accepted.

Unless otherwise specified, all tests shall be carried out in accordance with the document "Standard Laboratory Test Procedures for Quality Control Laboratories".

If the quality of the sample from any stockpile or consignment after test is found to be inferior to that required by the specifications the material of that consignment will not be accepted and the Contractor shall remove such rejected materials from site.

The Contractor may arrange for testing to be carried out at his own cost prior to delivery of materials to site but this shall in no way affect the Engineer's right to carry out tests and reject defective materials at the Works.

### **Bituminous Materials**

#### **Penetration Grade Bitumen**

**Sampling:** Bitumen shall be sampled in accordance with AASHTO T40. Samples thus sampled will be tested for penetration, specific gravity, softening point, loss on heating, flash point and solubility.

**Packing:** Bitumen shall be supplied in bulk in appropriate road tankers or be packed in securely sealed brand new steel drums.

**Penetration:** The penetration shall be not less than 80 and not more than 100, or as otherwise directed by the Engineer. Penetration shall be determined in accordance with AASHTO T49 at 25°C.

**Specific Gravity:** Specific gravity shall be determined in accordance with AASHTO T228.

Specific gravity at 25°C shall be not less than 1.00 and not more than 1.05.

**Softening Point:** Softening point shall be determined in accordance with AASHTO T53.

The softening point shall be not less than 43°C and not more than 54°C.

**Loss on Heating:** Loss on heating shall be determined in accordance with AASHTO T47.

Loss on heating shall not exceed 1%.

**Flash Point:** Flash point shall be determined in accordance with Cleveland Open Cup method AASHTO T48.

The flash point shall be not less than 230°C.

**Solubility:** Solubility shall be determined in accordance with AASHTO T44.

The solubility shall be not less than 99.0%.

General Requirements: The bitumen shall be homogeneous, free from water and shall not foam when heated to 180°C.

### **Asphalt Concrete Surface Course**

Asphalt Concrete Surface Course is intended as the top layer of pavement that is exposed to the traffic. It is placed on a binder or leveling course, or existing asphalt surface, the surface of which has been prepared with a Tack coat.

### **Asphalt layer Thickness and Surface Tolerances**

The thickness of asphalt concrete laid shall be monitored by pavement cores taken by the Contractor under the supervision of the Engineer.

The actual thickness of asphalt concrete placed over any given section of the Works shall be defined per lot in accordance with requirements and procedures noted in this specification.

The pavement must conform to the designed finished grade shown on the Drawings. The finished surface levels of the asphalt surfacing shall conform to the design finish grade at all points.

The variation of the finished surface of asphalt wearing courses from a 3 m-straightedge shall not exceed 5 mm at any point.

The tolerance accepted for the final level on the wearing course from the specified design levels shall be – 0 mm, + 5 mm.

## **BITUMINOUS MACADAM BASE COURSE (Penetration Method)**

### **Description**

This item shall consist of a base course of bituminous macadam composed of crushed stone aggregate and bituminous material applied by penetration methods, and shall be constructed on completed and accepted aggregate base course, sub-base or existing pavement with a tack coat in accordance with these Specifications and in conformity with the lines, grades, and typical cross-sections shown on the Drawings and approved by the Engineer.

### **Bituminous Material**

Bituminous material for the asphalt concrete surface course shall be AC-20 grade asphalt cement, conforming to the requirements of AASHTO M 226.

### **Construction Methods**

The base course or other underlying course or existing pavement upon which this course is to be constructed shall be swept thoroughly clean.

A tack coat shall be applied to the underlying layer if directed by the Engineer. Spreader boxes of an approved design or self-propelled spreading and levelling devices or approved hand methods of spreading and levelling will be required.

## **A) Rollers**

All rollers for this item shall meet the requirements of the Engineer and shall be at least 10 tonnes mass static/vibrating rollers with smooth steel wheels.

A sufficient number of rollers shall be used to perform the required rolling for the programmed rate of completion without exceeding the total combined rolling capacity of the rollers used. The total amount of rolling required shall be divided among the operations of preliminary rolling.

## **B) Applying Bituminous Material**

No bituminous material shall be applied when the temperature of the atmosphere on the work is below 5°C nor when the aggregate in the course is damp or wet. Without disturbing the rolled aggregate course, the bituminous material shall be uniformly applied by means of pressure distributors or other means approved by the Engineer. Hand pouring pots of known volume or single hand spray nozzles may be used with the approval of the Engineer if the surface is marked out in equal areas of a convenient size to be covered by whole container loads of bitumen.

## **C) First Penetration, Filling and Rolling**

Immediately after the bituminous material is applied Type A or B size choke aggregate shall be evenly spread over that area of the course. The specific size to be determined by the Engineer and shall be applied at the rate approved by the Engineer.

## **D) Second Penetration, Filling and Rolling**

Following the completion of the work described under Section (C) above the bituminous material for the second penetration of the base course shall be applied and before it has cooled Type B or C size choke aggregate shall be spread at the rate approved by the Engineer.

The surface of the course shall then be broom dragged and rolled in the same manner as after the first application of bituminous materials. The dragging and rolling shall be continued until the required rolling is completed and all surface voids in the base course are filled.

The surface of the course shall be tested with a straight edge 3000 mm long applied parallel to the center line of the pavement, and any irregularities, 10 mm or more, shall be corrected as directed. Upon completion of this operation and before any surface course material is placed all loose aggregate shall be swept from the surface of the base course.

## **E) Protection of Structures from Bituminous Material**

When bituminous material is being applied, the surface of all structures shall be protected by a satisfactory method or device to prevent their surface from becoming marred by the operation.

## **F) Surface Tolerance**

The final surface shall not vary more than 10 mm from a template cut to the cross section of the surface of the course nor 10 mm from a 3000 mm straight edge applied parallel to the centre line of the course.



## **G) Testing**

To determine the compliance with the Specification the Contractor shall cut out core samples of the freshly completed work at random locations selected by the Engineer. These locations shall not be more than 200 lane meters apart. Samples shall be checked for gradation, bitumen content and thickness generally as provided for in Section 4001 of this Specification.

## **BITUMINOUS PRIME COAT AND TACK COAT**

This item shall consist of the careful cleaning of a base, wearing course or an existing road surface and the application of a prime coat or tack coat of bituminous material as described in these Specifications.

### **Materials**

#### **A) Prime Coat**

The primer seal or prime coat shall be 80/100 bitumen mixed with 30%-35% kerosene by volume or alternative primer of a grade approved by the Engineer.

The primer application rate shall nominally be 1.0 liters per sq.m (residual bitumen) but shall be within the range 0.80 - 1.40 liters per sq.m as directed by the Engineer.

#### **B) Tack Coat**

A tack coat shall be applied where directed to bond a new bituminous surface to an older surface. A tack coat shall comprise a light application of bituminous material in a similar manner to the prime coat. The tack coat shall be 80/100 bitumen mixed with 0% - 5% kerosene by volume.

### **Construction Methods**

#### **C) Cleaning Surface**

Surface to be tacked or primed shall be thoroughly cleaned to remove all mud, earth, dust, animal droppings and other foreign material.

The sweeping on a water bound surface shall be just sufficient to expose the pattern of the coarse aggregate.

Material cleared from the surface shall be removed and disposed of as directed by the Engineer.

#### **D) Protection of Structures from Bituminous Material**

When bituminous material is being applied, the surfaces of all structures shall be protected by a satisfactory method or device to prevent their surface from being marred or defaced by the operation

#### **E) Applying Bituminous Material**

- i. After the surface has been cleaned as described above and when in a dry condition, the bituminous material, except as noted below, shall be uniformly applied by means

of heating and distributing equipment conforming to the requirements of Section 4400.

- ii. Prior to commencing bitumen application for the Works, the Contractor at his own cost shall demonstrate to the Engineer by means of trial sections the method he proposes to use for bitumen application. This method must be approved by the Engineer before the Contractor shall be permitted to commence bitumen application.
- iii. In irregular areas, such as driveways and intersections, the method of application shall be that approved by the Engineer. Dry spots shall be retreated and excess pools of bituminous material shall be removed from the surface.
- iv. The temperature of the cut back bitumen at the time of application shall be within the range 110°C - 135°C, unless the Engineer approves or directs that application be carried out at a lower temperature.

Tack coats shall not be applied when the shade air temperature is under 5°C. Prime coats shall not be applied when the shade air temperature is below 0°C nor when the air temperature within the proceeding 24 hours has been 5°C or lower. Prime coats on new macadam, and stabilized and granular base courses may be applied when the shade air temperature is not less than 5°C.

#### **F) Tack Coat**

Tack coats shall be provided only where directed by the Engineer. When a tack coat is to be provided it shall not precede the work of placing the subsequent course to such an extent that the treated surface may be damaged.

#### **G) Prime Coat**

Primer shall be applied in one or more applications if directed by the Engineer except that the Engineer may vary the rate of application depending upon the condition of the surface being primed.

### **BITUMINOUS PREMIX SURFACE COURSE (HOT ROLLED ASPHALT)**

#### **Description**

This item shall consist of one or more courses of compacted bituminous premix constructed on the prepared base, or existing pavement, in accordance with these Specifications and in conformity with the lines, grades, designed thickness, typical cross sections and other details shown on the Drawings or approved by the Engineer.

The bituminous premix shall be composed of a mixture of coarse and fine aggregate, approved mineral filler and bitumen. The mix shall be nominal 20 mm maximum size unless the Engineer directs that a mix of 10 mm nominal maximum size be used in locations where minor correction layers are required.

## **Materials**

### **A) Binder**

Unless otherwise noted on the Drawings or in the Special Provisions the binder used shall have penetration grade bitumen meeting the requirements of Section 4202. It shall not be cut back.

### **B) Coarse Aggregate**

Coarse aggregate (material retained on the 2.36 mm Sieve), shall be crushed stone, crushed slag or crushed gravel. The sodium asphalt soundness loss shall not exceed 9 percent and the magnesium asphalt loss shall not exceed 12 percent when tested in accordance with AASHTO T104. All crushed aggregate shall be produced by means of a Cone Crusher unless otherwise directed by the Engineer.

### **C) Fine Aggregate**

The fine aggregate shall be defined as material passing the 2.36 mm sieve and shall be either a natural or manufactured product, the surface of which shall be clean and free from clay and any deleterious coatings. The Plasticity Index of the material passing the 0.425 mm sieve shall not exceed 4 and shall have a sand equivalent not less than 50 as determined by the Sand Equivalent Test AASHTO T176.

### **D) Mineral Filler**

Mineral filler shall consist of rock dust, hydrated lime or Portland cement. It shall be dry and free from lumps and shall meet the following grading requirements:

Table 3-1

Particle Size	Percentage by Mass Passing (AASHTO T-11 and T-27)
0.6 mm	100
0.18 mm	95 - 100
0.075 mm	65 - 100

### **E) Sampling, Testing and Approval of Materials**

Prior to the delivery of any mineral aggregate or mineral filler, the Contractor shall furnish and test samples under the supervision of the Engineer.

The test procedures to be used are as listed below although the Engineer may specify other tests should these be required.

**Table 3-2**

Characteristic	Method of Test	
	AASHTO	ASTM
Materials Finer than 0.075 mm sieve	T 11	C 117
Unit Weight of Aggregate	T 19	C 29
Sieve analysis of Fine and Coarse Aggregates	T 27	C 136
Sieve Analysis of Mineral filler	T 37	C 546
Resistance to Abrasion of Coarse Aggregate using Los Angeles Machine	T 96	C 131
Soundness of Aggregates by use of Sodium Asphalt	T 104	C 88
Plastic Fines in Graded Aggregates and Soil by use of the Sand Equivalent Test	T 176	-
Asphalt Content by Quantities Extraction	T164	D2172
Mechanical Analysis of Extracted Aggregate	T30	-

## Mix Design

The mix design shall comply with the following tables which show the composition limits within which the mixes will be approved by the Engineer.

**Table- 3-3 Mix property requirement**

Mix Properties	Asphalt Concrete Binder Course	Asphalt Surface Course
Specimen compaction	75	75 blows
Stability (minimum)	6000 N	6000 N
Flow	2-5 mm	2 - 5 mm
Air voids %	3-5 mm	3-5 mm
Voids in mineral aggregate % (minimum)	13	14
Retained Marshall Stability %(minimum)	70%	70%

## General Requirements

### Field Laboratory

The Contractor shall provide a suitable field laboratory meeting the requirements as set forth in this Specification and required by the Engineer to perform the specified tests on aggregates, mixes and cores.

## **Construction Methods**

### **A) Cleaning of Base of Old Pavement**

Immediately prior to the arrival of the mix at the paving site, the base, levelling course or old pavement to be surfaced shall have been thoroughly cleaned of all soil or foreign materials. Unstable or fatty patches of surplus bituminous material shall be removed from the old pavement and be replaced where necessary with suitable material, before spreading of any of the bituminous mixtures.

The cost of such cleaning and preparation shall be included in the price bid for bituminous premix.

### **B) Transportation and Placing of Mixtures**

Mixtures shall be transported to the work in trucks having tight, clean and smooth metal beds that have been sprayed or painted with a minimum amount of soapy water to prevent mixture from adhering to the beds.

When any mixtures are being transported at shade air temperatures below 10°C or when the length of haul exceeds 10 kilometres, all truck beds shall be insulated to maintain workable temperature of the mixture. The maximum distance mixtures may be transported from mixing plant to paving site shall not exceed 30 kilometres except by specific permission of the Engineer.

### **C) Compaction**

After spreading, the mixture shall be thoroughly and uniformly compacted. The density of the completed pavement shall be in accordance with the requirements specified below.

Steel wheel rollers shall be tandem static/vibratory rollers unless otherwise approved by the Engineer. Pneumatic tyred rollers shall have a minimum of 7 wheels and be capable of adjusting tyre pressure while moving.

Rolling shall be carried out in three sequences:

- \* Breakdown rolling by steel wheel roller at a temperature not less than 110°C
- \* Secondary rolling by pneumatic tyred roller
- \* Finish rolling, by smooth wheel vibrating or static rollers at a temperature not less than 70°C.

In general, rolling shall begin at the sides and shall progress toward the centre, parallel to the centreline of the roadway.

In areas adjacent to kerbs, compaction shall be performed with a reciprocating tamper or trench roller, or other method, to the approval of the Engineer.

The Contractor shall employ only bituminous surfacing skilled operators, supervisors and drivers who are capable of adjusting their operations to the observed conditions.

Where the paving and rolling of the surfacing is not carried out in a workmanlike manner the Engineer may suspend surfacing operations until suitably skilled workmen and operators are provided by the Contractor.

#### **D) Small Tools and Portable Equipment**

The Contractor shall provide all necessary tools and keep them in first-class condition. Sufficient number of standard 3000 mm straight edges or surface testers for bituminous pavements and standard templates constructed to the true cross section of the road shall be provided by the Contractor and shall be available at all times at all individual work sites where they may be required to be used. This provision shall be complied with before work is started.

## **Part 4. MISCELLANEOUS WORKS**

### **Pavement Markings**

This item shall consist of the supply of materials for and the placing of all lines, symbols, patterns, work messages and numerals or other devices set in the surface of, applied upon or attached to the pavement or curb for the purpose of regulating, warning or guiding traffic as specified herein, shown on the Drawing or instructed by the Engineer.

Lines shall be applied to mark the division of carriageway lanes and unless otherwise specified shall be 100 mm wide between lanes and 150 mm wide at the edges of lanes and as shown on the Drawings.

### **Materials**

All paints shall be road marking paint conforming to AASHTO M248 Type F and made by an approved manufacturer and suitable for application, by the means proposed, to the road surfaces laid by the Contractor. Samples of materials to be used shall be demonstrated to the Engineer.

The markings shall, where shown on the Drawings or required by the Engineer, be non-reflectorized.

The drying time of the paint shall not exceed five (5) minutes.

The paint shall be applied evenly to the road surface at the thickness recommended by the manufacturer and not less than 0.3 mm. The finished work shall be true to line and have sharp edges.

White paint shall be colored by not less than 48% pigment of which about 35% shall be titanium dioxide.

Yellow paint shall be colored by not less than 48% of a suitable yellow pigment giving standard color BS 381C No. 355 except where an alternative shade has been approved.

### **Longitudinal Lines**

#### **Separation and Barrier Line (Centre line)**

Separation and barrier lines shall be used to define the portion of roadway to be used by opposing streams of traffic. The separation line shall be a single broken line. The width of the line shall be 100 mm.

## **Part 5. CONCRETE PRODUCTION**

### **Contractor's Plant, Equipment and Construction Facilities**

#### **General**

#### **Mixing of Concrete**

All concrete shall be machine mixed at the site. Concrete shall be thoroughly mixed in a batch mixer of an approved size and type which will ensure a uniform distribution of the materials throughout the mass. No mixer having a rated capacity of less than one bag of cement shall be used nor shall a mixer be charged in excess of its rated capacity.

Containers for measuring aggregates, sand, water and cement shall be approved by the Engineer.

#### **Handling and Placing of Concrete**

Concrete shall not be placed until the reinforcement and the forms have been inspected and approved by the Engineer.

Before placing of concrete all sawdust, wood chips and other construction debris and extraneous matter shall be removed from the interior of the forms, the reinforcement shall be thoroughly cleaned; and the forms and reinforcement shall be thoroughly wetted.

#### **Maximum Size Aggregate**

- A) Unless otherwise approve or directed, the nominal maximum size aggregate used in concrete shall be in accordance with Table 5-1.
- B) In heavily reinforced sections and in walls less than 275 mm in thickness, the Engineer may direct the use of a smaller maximum size aggregate.

#### **Properties of Concrete**

##### **Required Properties of Concrete**

The class of concrete and properties applicable to the concrete in various structures shall be as specified In (Table 5-1). The Contractor shall design mixes to satisfy the properties specified in this table.



**Table 5-1 - Standard Classes of Concrete**

Class of concrete	Maximum size of aggregate (mm)	Maximum Water-cement ratio by mass	Minimum cement content (Kg/cm)	Maximum Slump (mm)	28 day cylinder strength (MPa)
A	20	0.45	360	75	35
B	20	0.45	360	75	30
C	10	0.50	410	60	25
D	20	0.50	360	75	25
E	20	0.55	290	75	15
F	20	0.70	220	75	15

### **Construction of Concrete Feature of works**

Construction of each feature of works must be confirmed with specification and UNICEF Engineer's approval and slump test must take during the concrete pouring from each concrete truck.

Strength of concrete working for is the same M150 for construction of RCC ditches and PCC in front of Generator Rooms that listed in here:

1. Construction of RCC Ditches as per drawing and UNICEF Engineer coordination.
2. Construction of RCC Slab on the Dry Wells and other areas which showed in drawing, but pcc wall into dry well's wall is except from above items, so strength of the pcc concrete into wall advice to be M150.
3. Construction of PCC in front of generator slop areas as showed in drawing details

Note: During the construction of RCC ditches, contractor try to provide proper slops on the bed of ditches to drain the water through dry wells and dry well's location would be selected in accordance with direction of ditches' water or slop of ditches.

### **Quality Control**

**Strength of concrete:** The strength of the concrete shall be 25 Mpa cylinder strength at 28 days and shall be tested in the laboratory. If average strength of the concrete does not comply with specifications, contractors shall re-concrete on his own expenses.

**Water/Cement Ratio:** The ratio of free water to cement when using saturated surface dry aggregate shall be as low as possible and may vary between 0.45 to 0.50 by weight for all concrete unless otherwise stated.

**Workability:** The concrete shall be of suitable workability to obtain full compaction. Slumps measured shall not exceed 75mm+/-25mm unless otherwise directed or approved by the Engineer. Slump tests shall be carried out regularly during any concreting operations.

**Sampling and Testing of Concrete:** The Contractor shall take samples of the concrete for 25 Mpa testing. The number, frequency and location shall be decided by the Engineer. A minimum of 3 concrete cubes/cylinders should be taken for each days of casting, or every 15 m3 of concrete cast in larger pours, and tested at 28 days.

**Formwork:** Formwork shall include all temporary or permanent molds for forming the concrete. All formwork shall be of wood or metal and shall be built mortar tight and rigid enough to maintain the concrete in position during placing, compacting, setting and hardening.

**Water:** The water used in concrete, grout and mortar, for washing aggregate and for curing concrete, shall be subject to approval and shall be free from objectionable quantities of suspended material, organic matter, acid, alkali, salts, sugar and other impurities.

### **Placing, Fixing and Cover**

Immediately before the concrete is placed around the reinforcement, the reinforcement shall be clean, free from mud, oil, grease, paint, loose rust, loose mill scale or any other substance that can have an adverse chemical effect on the steel or concrete, or reduce the bond. Reinforcement shall be positioned as shown on the Drawings and accurately secured in these positions by tying with annealed wire or by the use of suitable clips or, where permitted by the Engineer, by tack welding. Projecting ends of ties or clips shall not encroach into the concrete cover.

Where protruding bars/splints are exposed to the elements for an indefinite period the bars/splints shall be adequately protected against corrosion and damage and shall be properly cleaned before being permanently encased in concrete.

The term "cover" in this context shall mean the minimum clear thickness of concrete between the surface of the reinforcement and face of the concrete. The minimum cover shall be as shown on the Drawings.

### **Type of Cement**

- A) Cement for concrete, mortar and grout shall be from an approved source and shall conform to the requirements of AASHTO M85 for Type I cement. Cement shall have low alkali content with a sodium oxide equivalent of less than 0.6%.
- B) For surfaces exposed to public view, where color of the finished concrete is important, all cement shall be of the same type and color and from one source.

## **Part 6. ELECTRICAL SERVICES**

### **AIMS**

#### **Responsibilities**

Provide electrical systems in conformance with the **Electrical DESIGN DRAWING SHEET**.

#### **Qualification**

Use only persons appropriately experienced and qualified to undertake the electrical construction work on the systems documented.

#### **Performance**

Carry out verification tests and measurements to show compliance with the specification

#### **Rates for installation work**

Rates for installation of cabling, light fittings, and all other electrical components are to include allowance for fixings, connection, chasing of wiring and any other works required for the installation of the electrical system to a fully operational and safe working condition.

### **Inspection**

#### **Notice**

Give sufficient notice so that inspection may be made of the following:

- Underground electrical services conduits prior to concealment.
- Above ground electrical services conduits into electrical poles prior to installation.
- Connection of wires in switchboards or exist main panel board prior to installation.

#### **Inspection and testing on completion**

To verify that the requirements of this specification have been met, all electrical installations and any alterations, additions or repairs to an existing electrical installation, after completion and before being energized shall be:

- Inspected as far as is practicable
- Tested

Precautions shall be taken to insure the safety of persons and to avoid damage to property and the electrical installation equipment during inspection and testing.

#### **Testing:**

After completion of, or in association with the visual inspection tests, testing shall be carried out on the electrical installation to verify that it complies with ther requirements of this specification and that it is suitable for the use intended.

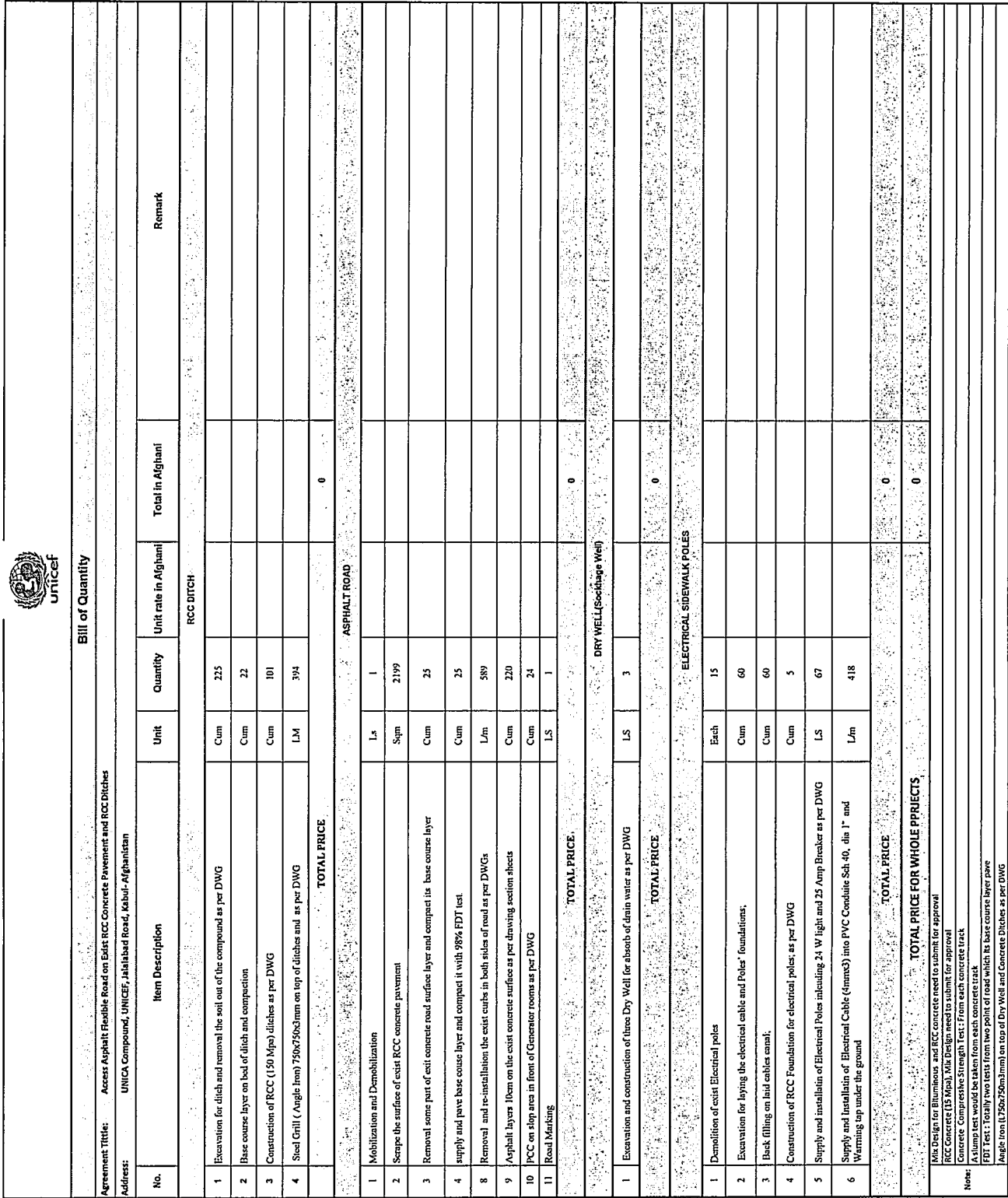
### **Electrical installations**

All cabling and wiring is to be installed in PVC sch 40 conduit and exist cables underground must be removed during the construction and burn the new cable.

Above electrical cable about 30cm high, the warranting tap must be installed and the color of warranting tap for electrical system is yellow or red.

International standard connectors (chocolate block) for the wiring and cabling are to be used for all connections, no other method is acceptable.







Annex II

Bid Security/Guarantee

(BANK GUARANTEE)

To: United Nation Children fund (UNICEF)

UNICEF-ACO Afghanistan Country Office,  
Pul-e-Charkhi Road, Paktia Kote, district 9,  
Kabul, Afghanistan

WHEREAS \_\_\_\_\_ (name and address of bidder)

(hereinafter called "[\_\_\_\_\_]") has undertaken in pursuance of ITB No. **9125849**

Dated **13 Jun 2016** to execute **Resurfacing the access road works at UNICEF Afghanistan**

(name of project and brief description of works).

AND WHEREAS it has been stipulated by you in the said Document that the bidder shall furnish a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with its obligations in accordance with requirement

AND WHEREAS we have agreed to give the bidder such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the bidder up to a total of **200,000/AFN** [amount of guarantee] **two hundred thousand Afghani** [in words], such sum being payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of **200,000/AFN** [amount of guarantee] as aforesaid without your needing to prove or to show grounds for your demand for the sum specified therein.

. We hereby waive the necessity of your demanding the said debt from the bidder before presenting us with the demand. We further agree that no change or addition to or other modification of the terms of the bid security to be performed there under or of any of the bidding documents which may be made between you and bidder shall in any way release us from any liability under the guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid until the date of issue official letter from your office. No change on content or validity of this Bank Guarantee shall be undertaken by the bank without UNICEF permission.

Signature and Seal of the Guarantor \_\_\_\_\_

Name of Bank \_\_\_\_\_

Address \_\_\_\_\_

Date \_\_\_\_\_

