

# **PHILIPPINE BIDDING DOCUMENTS**

(As Harmonized with Development Partners)

## **Procurement of INFRASTRUCTURE PROJECT: RENOVATION OF GATES 1, 2, and 4 to INCLUDE INSTALLATION OF INSPECTION BAY AREAS**

Government of the Republic of the Philippines

**Sixth Edition  
July 2020**

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# *Glossary of Terms, Abbreviations, and Acronyms*

**ABC** – Approved Budget for the Contract.

**ARCC** – Allowable Range of Contract Cost.

**BAC** – Bids and Awards Committee.

**Bid** – A signed offer or proposal to undertake a contract submitted by a bidder in response to and in consonance with the requirements of the bidding documents. Also referred to as *Proposal* and *Tender*. (2016 revised IRR, Section 5[c])

**Bidder** – Refers to a contractor, manufacturer, supplier, distributor and/or consultant who submits a bid in response to the requirements of the Bidding Documents. (2016 revised IRR, Section 5[d])

**Bidding Documents** – The documents issued by the Procuring Entity as the bases for bids, furnishing all information necessary for a prospective bidder to prepare a bid for the Goods, Infrastructure Projects, and/or Consulting Services required by the Procuring Entity. (2016 revised IRR, Section 5[e])

**BIR** – Bureau of Internal Revenue.

**BSP** – Bangko Sentral ng Pilipinas.

**CDA** – Cooperative Development Authority.

**Consulting Services** – Refer to services for Infrastructure Projects and other types of projects or activities of the GOP requiring adequate external technical and professional expertise that are beyond the capability and/or capacity of the GOP to undertake such as, but not limited to: (i) advisory and review services; (ii) pre-investment or feasibility studies; (iii) design; (iv) construction supervision; (v) management and related services; and (vi) other technical services or special studies. (2016 revised IRR, Section 5[i])

**Contract** – Refers to the agreement entered into between the Procuring Entity and the Supplier or Manufacturer or Distributor or Service Provider for procurement of Goods and Services; Contractor for Procurement of Infrastructure Projects; or Consultant or Consulting Firm for Procurement of Consulting Services; as the case may be, as recorded in the Contract Form signed by the parties, including all attachments and appendices thereto and all documents incorporated by reference therein.

**Contractor** – is a natural or juridical entity whose proposal was accepted by the Procuring Entity and to whom the Contract to execute the Work was awarded. Contractor as used in these Bidding Documents may likewise refer to a supplier, distributor, manufacturer, or consultant.

**CPI** – Consumer Price Index.

**DOLE** – Department of Labor and Employment.

**DTI** – Department of Trade and Industry.

**Foreign-funded Procurement or Foreign-Assisted Project** – Refers to procurement whose funding source is from a foreign government, foreign or international financing institution as specified in the Treaty or International or Executive Agreement. (2016 revised IRR, Section 5[b]).

**GFI** – Government Financial Institution.

**GOCC** – Government-owned and/or –controlled corporation.

**Goods** – Refer to all items, supplies, materials and general support services, except Consulting Services and Infrastructure Projects, which may be needed in the transaction of public businesses or in the pursuit of any government undertaking, project or activity, whether in the nature of equipment, furniture, stationery, materials for construction, or personal property of any kind, including non-personal or contractual services such as the repair and maintenance of equipment and furniture, as well as trucking, hauling, janitorial, security, and related or analogous services, as well as procurement of materials and supplies provided by the Procuring Entity for such services. The term “related” or “analogous services” shall include, but is not limited to, lease or purchase of office space, media advertisements, health maintenance services, and other services essential to the operation of the Procuring Entity. (2016 revised IRR, Section 5[r])

**GOP** – Government of the Philippines.

**Infrastructure Projects** – Include the construction, improvement, rehabilitation, demolition, repair, restoration or maintenance of roads and bridges, railways, airports, seaports, communication facilities, civil works components of information technology projects, irrigation, flood control and drainage, water supply, sanitation, sewerage and solid waste management systems, shore protection, energy/power and electrification facilities, national buildings, school buildings, hospital buildings, and other related construction projects of the government. Also referred to as *civil works or works*. (2016 revised IRR, Section 5[u])

**LGUs** – Local Government Units.

**NFCC** – Net Financial Contracting Capacity.

**NGA** – National Government Agency.

**PCAB** – Philippine Contractors Accreditation Board.

**PhilGEPS** - Philippine Government Electronic Procurement System.

**Procurement Project** – refers to a specific or identified procurement covering goods, infrastructure project or consulting services. A Procurement Project shall be described, detailed, and scheduled in the Project Procurement Management Plan prepared by the agency which shall be consolidated in the procuring entity's Annual Procurement Plan. (GPPB Circular No. 06-2019 dated 17 July 2019)

**PSA** – Philippine Statistics Authority.

**SEC** – Securities and Exchange Commission.

**SLCC** – Single Largest Completed Contract.

**UN** – United Nations.

## ***Section I. Invitation to Bid***

## Invitation to Re-Bid for Renovation of Gates 1, 2, and 4 to include Installation of Inspection Bay Areas

1. The John Hay Management Corporation (JHMC), through the Corporate Operating Budget for CY 2020 intends to apply the sum of Two Million One Hundred Thousand Pesos (PhP 2,100,000.00) being the Approved Budget for the Contract (ABC) to payments under the contract for Renovation of Gates 1,2, and 4 to include Installation of Inspection Bay Areas (Contract No. INFRA-03 2020). Bids received in excess of the ABC shall be automatically rejected at bid opening.
2. The JHMC now invites bids for the above Procurement Project. Completion of the Works is required One hundred seventeen (117) calendar days. Bidders should have completed a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II (Instructions to Bidders). Prospective Bidders shall submit bids for all projects.
3. Bidding will be conducted through open competitive bidding procedures using non-discretionary “pass/fail” criterion as specified in the 2016 revised Implementing Rules and Regulations (IRR) of Republic Act (RA) No. 9184.

JHMC allows the participation of prospective bidders through personal appearance or video conferencing. Bidders may submit their bids using the two (2) separate sealed bid envelopes system or **two (2) password-protected Bidding Documents in compressed archive folders, in case of electronic bid submission**, and which shall be submitted simultaneously. The first shall contain the technical component of the bid, including the eligibility requirements, and the second shall contain the financial component of the bid.

4. Interested bidders may obtain further information from John Hay Management Corporation (JHMC) and inspect the Bidding Documents at the address given below from 3 December 2020 from 10 A.M to 2 P.M., Monday to Thursday.

A complete set of Bidding Documents may be acquired by interested bidders on 3 December 2020 from the given address and website/s below and upon payment of the applicable fee for Bidding Documents in the amount of Php 1,000.00, pursuant to the latest Guidelines issued by the GPPB. The Procuring Entity shall allow the bidder to present its proof of payment for the fees and may be presented in person, by facsimile, or through electronic means.



Interested bidders may personally pay for Bidding Documents at the Finance Department, Cottage 625, JHMC Office Complex, Camp John Hay, Baguio City. They may also pay via electronic fund transfer or direct bank deposit using the following deposit details:

Payee Name	John Hay Management Corporation
Depository Bank	Development Bank of the Philippines Session Road, Baguio City Branch
Account Number	0510-004308-031

For payments through electronic fund transfer or direct bank deposit, transfer confirmations or deposit slips must be emailed to [bac@jhmc.com.ph](mailto:bac@jhmc.com.ph). Official receipts will only be issued upon verification with JHMC's depository bank.

5. Bids must be duly received by the BAC Secretariat through manual submission at the JHMC Conference Room, Sheridan Drive, Camp John Hay, Baguio City on or before 9:00 A.M. on 09 December 2020. Late bids shall not be accepted.
6. All bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 16.
7. Bid opening shall be at 10:00 A.M on 09 December 2020 at the JHMC Conference Room, Sheridan Drive, Camp John Hay, Baguio City and/or through video conferencing. Bids will be opened in the presence of the bidders' representatives who choose to attend the activity.
8. In compliance with the health protocols against the COVID-19 Pandemic, JHMC is limiting the physical presence of participants for the Pre-bid conference and Bid Opening to ten (10) persons with one (1) representative from each prospective bidder. Selection of the ten (10) participants shall be based on the earliest time such a request was made. It is highly encouraged that other prospective bidders attend the Pre-Bid Conference and Bid Opening through video conferencing.

Prospective Bidders who are confirmed to attend in person shall submit themselves to the DOH and /or LGU permits/passes and certificates.

9. The John Hay Management Corporation (JHMC) reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised Implementing Rules and Regulations (IRR) of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
10. For further information, please refer to:

The BAC Secretariat  
John Hay Management Corporation  
Cottage 627, JHMC Office Complex,  
Camp John Hay, Baguio City  
Telephone Number (074) 424-5824

E-mail: [bac@jhmc.com.ph](mailto:bac@jhmc.com.ph)

11. You may visit the following websites:

For downloading of Bidding Documents: [www.jhmc.com.ph](http://www.jhmc.com.ph)

For online bid submission: [bac@jhmc.com.ph](mailto:bac@jhmc.com.ph)

(sgd.) **JANE THERESA G. TABALINGCOS**  
BAC Chairperson

## *Section II. Instructions to Bidders*

## 1. Scope of Bid

The Procuring Entity, John Hay Management Corporation invites Bids for the Renovation of Kadaclan Control Point and Relocation of Ranger Station, with Project Identification Number *INFRA- -2020*.

The Procurement Project (referred to herein as “Project”) is for the construction of Works, as described in Section VI (Specifications).

## 2. Funding Information

2.1. The GOP through the source of funding as indicated below for Corporate Operating Budget for CY 2020 in the amount of Four Hundred Ninety Three Thousand Nine Hundred Fifty Four Pesos (PhP 493,954.00).

2.2. The source of funding is:

JHMC Corporate Operating Budget 2020.

## 3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manual and associated policies, rules and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or invitation to bid by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have inspected the site, determined the general characteristics of the contracted Works and the conditions for this Project, such as the location and the nature of the work; (b) climatic conditions; (c) transportation facilities; (c) nature and condition of the terrain, geological conditions at the site communication facilities, requirements, location and availability of construction aggregates and other materials, labor, water, electric power and access roads; and (d) other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

## 4. Corrupt, Fraudulent, Collusive, Coercive, and Obstructive Practices

The Procuring Entity, as well as the Bidders and Contractors, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

## 5. Eligible Bidders

- 5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.
- 5.2. The Bidder must have an experience of having completed a Single Largest Completed Contract (SLCC) that is similar to this Project, equivalent to at least fifty percent (50%) of the ABC adjusted, if necessary, by the Bidder to current prices using the PSA's CPI, except under conditions provided for in Section 23.4.2.4 of the 2016 revised IRR of RA No. 9184.  
  
A contract is considered to be "similar" to the contract to be bid if it has the major categories of work stated in the **BDS**.
- 5.3. For Foreign-funded Procurement, the Procuring Entity and the foreign government/foreign or international financing institution may agree on another track record requirement, as specified in the Bidding Document prepared for this purpose.
- 5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.2 of the 2016 IRR of RA No. 9184.

## 6. Origin of Associated Goods

There is no restriction on the origin of Goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN.

## 7. Subcontracts

- 7.1. The Bidder may subcontract portions of the Project to the extent allowed by the Procuring Entity as stated herein, but in no case more than fifty percent (50%) of the Project.

The Procuring Entity has prescribed that:

- a. Subcontracting is not allowed.
- 7.1. The Bidder must submit together with its Bid the documentary requirements of the subcontractor(s) complying with the eligibility criteria stated in **ITB** Clause 5 in accordance with Section 23.4 of the 2016 revised IRR of RA No. 9184 pursuant to Section 23.1 thereof.
  - 7.2. The Supplier may identify its subcontractor during the contract implementation stage. Subcontractors identified during the bidding may be changed during the implementation of this Contract. Subcontractors must submit the documentary requirements under Section 23.1 of the 2016 revised IRR of RA No. 9184 and comply with the eligibility criteria specified in **ITB** Clause 5 to the implementing or end-user unit.

- 7.3. Subcontracting of any portion of the Project does not relieve the Contractor of any liability or obligation under the Contract. The Supplier will be responsible for the acts, defaults, and negligence of any subcontractor, its agents, servants, or workmen as fully as if these were the Contractor's own acts, defaults, or negligence, or those of its agents, servants, or workmen.

## **8. Pre-Bid Conference**

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address JHMC Conference Room, Sheridan Drive, Camp John Hay, Baguio City and/or through videoconferencing/webcasting as indicated in paragraph 6 of the **IB**.

## **9. Clarification and Amendment of Bidding Documents**

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

## **10. Documents Comprising the Bid: Eligibility and Technical Components**

- 10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 10.2. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. For Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.
- 10.3. A valid PCAB License is required, and in case of joint ventures, a valid special PCAB License, and registration for the type and cost of the contract for this Project. Any additional type of Contractor license or permit shall be indicated in the **BDS**.
- 10.4. A List of Contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen) assigned to the contract to be bid, with their complete qualification and experience data shall be provided. These key personnel must meet the required minimum years of experience set in the **BDS**.

- 10.5. A List of Contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership, certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be, must meet the minimum requirements for the contract set in the **BDS**.

## **11. Documents Comprising the Bid: Financial Component**

- 11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section IX. Checklist of Technical and Financial Documents**.
- 11.2. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.
- 11.3. For Foreign-funded procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

## **12. Alternative Bids**

Bidders shall submit offers that comply with the requirements of the Bidding Documents, including the basic technical design as indicated in the drawings and specifications. Unless there is a value engineering clause in the **BDS**, alternative Bids shall not be accepted.

## **13. Bid Prices**

All bid prices for the given scope of work in the Project as awarded shall be considered as fixed prices, and therefore not subject to price escalation during contract implementation, except under extraordinary circumstances as determined by the NEDA and approved by the GPPB pursuant to the revised Guidelines for Contract Price Escalation guidelines.

## **14. Bid and Payment Currencies**

- 14.1. Bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies shall be converted to Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.
- 14.2. *Payment of the contract price shall be made in:*
- a. Philippine Pesos.

## **15. Bid Security**

- 15.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.
- 15.2. The Bid and bid security shall be valid until One Hundred Twenty Days. Any bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

## **16. Sealing and Marking of Bids**

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission to the given website or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

## **17. Deadline for Submission of Bids**

The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB**.

## **18. Opening and Preliminary Examination of Bids**

- 18.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

- 18.2. The preliminary examination of Bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.



## 19. Detailed Evaluation and Comparison of Bids

- 19.1. The Procuring Entity's BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*" using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of 2016 revised IRR of RA No. 9184.
- 19.2. If the Project allows partial bids, all Bids and combinations of Bids as indicated in the **BDS** shall be received by the same deadline and opened and evaluated simultaneously so as to determine the Bid or combination of Bids offering the lowest calculated cost to the Procuring Entity. Bid Security as required by **ITB** Clause 16 shall be submitted for each contract (lot) separately.
- 19.3. In all cases, the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184 must be sufficient for the total of the ABCs for all the lots participated in by the prospective Bidder.

## 20. Post Qualification

Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS), and other appropriate licenses and permits required by law and stated in the **BDS**.

## 21. Signing of the Contract

The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**.

## *Section III. Bid Data Sheet*

# Bid Data Sheet

ITB Clause																			
5.2	For this purpose, contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:  Metal/steel and concrete structures																		
7.1	Sub-contracting is not allowed.																		
10.3	No further instructions.																		
10.4	The key personnel must meet the required minimum years of experience set below:  <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Key Personnel</u></th> <th style="text-align: left;"><u>General Experience</u></th> <th style="text-align: left;"><u>Relevant Experience</u></th> </tr> </thead> <tbody> <tr> <td>Project Engineer</td> <td>Three (3) Years</td> <td>Building Construction</td> </tr> <tr> <td>Materials Engineer</td> <td>Three (3) Years</td> <td>Building Construction</td> </tr> <tr> <td>Construction Safety and Health Officer</td> <td>Three (3) Years</td> <td>Building Construction</td> </tr> <tr> <td>Foreman</td> <td>Three (3) Years</td> <td>Building Construction</td> </tr> </tbody> </table>	<u>Key Personnel</u>	<u>General Experience</u>	<u>Relevant Experience</u>	Project Engineer	Three (3) Years	Building Construction	Materials Engineer	Three (3) Years	Building Construction	Construction Safety and Health Officer	Three (3) Years	Building Construction	Foreman	Three (3) Years	Building Construction			
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10.5	The minimum major equipment requirements are the following:  <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Equipment</u></th> <th style="text-align: left;"><u>Number of Unit(s)</u></th> </tr> </thead> <tbody> <tr> <td>Welding Machine</td> <td>Three (3)</td> </tr> <tr> <td>Speed Cutter</td> <td>Three (3)</td> </tr> <tr> <td>Edger</td> <td>Three (3)</td> </tr> <tr> <td>Power drill</td> <td>Three (3)</td> </tr> <tr> <td>One Bagger Mixer, 4-6 cu.ft./min., 5.5 hp</td> <td>Three (3)</td> </tr> <tr> <td>Oxy- Acetylene with cutting outfit</td> <td>Three (3)</td> </tr> <tr> <td>Fusing machine</td> <td>Three (3)</td> </tr> <tr> <td>Concrete Vibrator</td> <td>Three (3)</td> </tr> </tbody> </table>	<u>Equipment</u>	<u>Number of Unit(s)</u>	Welding Machine	Three (3)	Speed Cutter	Three (3)	Edger	Three (3)	Power drill	Three (3)	One Bagger Mixer, 4-6 cu.ft./min., 5.5 hp	Three (3)	Oxy- Acetylene with cutting outfit	Three (3)	Fusing machine	Three (3)	Concrete Vibrator	Three (3)
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15.1	The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts: <ul style="list-style-type: none"> <li>a. The amount of not less than Forty Two Thousand Pesos (PhP 42,000.00), if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;</li> <li>b. The amount of not less than One Hundred Five Thousand Pesos (PhP 105,000.00) if bid security is in Surety Bond.</li> </ul>																		
19.2	Partial bid is not allowed. The infrastructure project is packaged in a single lot and the lot shall not be divided into sub-lots for the purpose of bidding, evaluation, and contract award.																		
20	Applicable JHMC Regulatory Permits/Licenses/Fees																		

21	Additional contract documents relevant to the Project that may be required by existing laws and/or the JHMC, such as construction schedule and S-curve, manpower schedule, construction methods, equipment utilization schedule, construction safety and health program approved by the DOLE, other acceptable tools of project scheduling, and the JHMC Construction Environment Management Plan (CEMP).
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## ***Section IV. General Conditions of Contract***

## 1. **Scope of Contract**

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

## 2. **Sectional Completion of Works**

If sectional completion is specified in the **Special Conditions of Contract (SCC)**, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date shall apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).

## 3. **Possession of Site**

4.1. The Procuring Entity shall give possession of all or parts of the Site to the Contractor based on the schedule of delivery indicated in the **SCC**, which corresponds to the execution of the Works. If the Contractor suffers delay or incurs cost from failure on the part of the Procuring Entity to give possession in accordance with the terms of this clause, the Procuring Entity's Representative shall give the Contractor a Contract Time Extension and certify such sum as fair to cover the cost incurred, which sum shall be paid by Procuring Entity.

4.2. If possession of a portion is not given by the above date, the Procuring Entity will be deemed to have delayed the start of the relevant activities. The resulting adjustments in contract time to address such delay may be addressed through contract extension provided under Annex "E" of the 2016 revised IRR of RA No. 9184.

## 4. **The Contractor's Obligations**

The Contractor shall employ the key personnel named in the Schedule of Key Personnel indicating their designation, in accordance with **ITB** Clause 10.3 and specified in the **BDS**, to carry out the supervision of the Works.

The Procuring Entity will approve any proposed replacement of key personnel only if their relevant qualifications and abilities are equal to or better than those of the personnel listed in the Schedule.

## **5. Performance Security**

- 5.1. Within ten (10) calendar days from receipt of the Notice of Award from the Procuring Entity but in no case later than the signing of the contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR.
- 5.2. The Contractor, by entering into the Contract with the Procuring Entity, acknowledges the right of the Procuring Entity to institute action pursuant to RA No. 3688 against any subcontractor be they an individual, firm, partnership, corporation, or association supplying the Contractor with labor, materials and/or equipment for the performance of this Contract.

## **6. Site Investigation Reports**

The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the SCC supplemented by any information obtained by the Contractor.

## **7. Warranty**

- 7.1. In case the Contractor fails to undertake the repair works under Section 62.2.2 of the 2016 revised IRR, the Procuring Entity shall forfeit its performance security, subject its property(ies) to attachment or garnishment proceedings, and perpetually disqualify it from participating in any public bidding. All payables of the GOP in his favor shall be offset to recover the costs.
- 7.2. The warranty against Structural Defects/Failures, except that occasioned-on force majeure, shall cover the period from the date of issuance of the Certificate of Final Acceptance by the Procuring Entity. Specific duration of the warranty is found in the SCC.

## **8. Liability of the Contractor**

Subject to additional provisions, if any, set forth in the SCC, the Contractor's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Contractor is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

## **9. Termination for Other Causes**

Contract termination shall be initiated in case it is determined *prima facie* by the Procuring Entity that the Contractor has engaged, before, or during the implementation of the contract, in unlawful deeds and behaviors relative to contract acquisition and implementation, such as, but not limited to corrupt, fraudulent, collusive, coercive, and obstructive practices as stated in **ITB** Clause 4.

## **10. Dayworks**

Subject to the guidelines on Variation Order in Annex “E” of the 2016 revised IRR of RA No. 9184, and if applicable as indicated in the **SCC**, the Dayworks rates in the Contractor’s Bid shall be used for small additional amounts of work only when the Procuring Entity’s Representative has given written instructions in advance for additional work to be paid for in that way.

## **11. Program of Work**

11.1. The Contractor shall submit to the Procuring Entity’s Representative for approval the said Program of Work showing the general methods, arrangements, order, and timing for all the activities in the Works. The submissions of the Program of Work are indicated in the **SCC**.

11.2. The Contractor shall submit to the Procuring Entity’s Representative for approval an updated Program of Work at intervals no longer than the period stated in the **SCC**. If the Contractor does not submit an updated Program of Work within this period, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program of Work has been submitted.

## **12. Instructions, Inspections and Audits**

The Contractor shall permit the GOP or the Procuring Entity to inspect the Contractor’s accounts and records relating to the performance of the Contractor and to have them audited by auditors of the GOP or the Procuring Entity, as may be required.

## **13. Advance Payment**

The Procuring Entity shall, upon a written request of the Contractor which shall be submitted as a Contract document, make an advance payment to the Contractor in an amount not exceeding fifteen percent (15%) of the total contract price, to be made in lump sum, or at the most two installments according to a schedule specified in the **SCC**, subject to the requirements in Annex “E” of the 2016 revised IRR of RA No. 9184.

## **14. Progress Payments**

The Contractor may submit a request for payment for Work accomplished. Such requests for payment shall be verified and certified by the Procuring Entity’s Representative/Project Engineer. Except as otherwise stipulated in the **SCC**, materials and equipment delivered on the site but not completely put in place shall not be included for payment.



## **15. Operating and Maintenance Manuals**

- 15.1. If required, the Contractor will provide “as built” Drawings and/or operating and maintenance manuals as specified in the **SCC**.
- 15.2. If the Contractor does not provide the Drawings and/or manuals by the dates stated above, or they do not receive the Procuring Entity’s Representative’s approval, the Procuring Entity’s Representative may withhold the amount stated in the **SCC** from payments due to the Contractor.

## ***Section V. Special Conditions of Contract***

# Special Conditions of Contract

GCC Clause	
2	Target date of completion is One Hundred Seventeen (117) calendar days upon the issuance of Notice to Proceed.
4.1	Upon issuance of Notice to Proceed.
6	The site investigation reports are: existing site conditions
7.2	In case of semi-permanent structures, such as buildings of types 1, 2, and 3 as classified under the National Building Code of the Philippines, concrete/asphalt roads, concrete river control, drainage, irrigation lined canals, river landing, deep wells, rock causeway, pedestrian overpass, and other similar semi-permanent structures: Five (5) years.
10	Dayworks are applicable at the rate shown in the Contractor's original Bid.
11.1	The Contractor shall submit the Program of Work to the Procuring Entity's Representative within Five (5) Calendar days from delivery of the Notice of Award.
11.2	The amount to be withheld for late submission of an updated Program of Work is One Thousand Pesos (Php1,000.00)
13	The amount of the advance payment is fifteen (15) percent to be released within 20 days from receipt of letter and other requirements.
14	No further instructions.
15.1	The date by which "as built" drawings are required is upon request for progress and final billings.
15.2	The amount to be withheld for failing to produce "as built" drawings and/or operating and maintenance manuals by the date required is One Thousand Pesos (Php1,000.00) per day of non-submission.

# *Section VI. Specifications*

## **1. SCOPE OF WORK FOR BIDDERS**

- 1.1 To construct Inspection Bays at Gates 1, 2, and 4 for security purposes and to ensure that entry and exit of construction materials within the area are monitored to avoid illegal construction.
- 1.2 To impose required construction safety practices during the implementation of the project in compliance with the approved Occupational Safety and Health Program as established by the Department of Labor and Employment (DOLE).
- 1.3 To provide and maintain an accessible temporary field office/storage, portable toilets/latrines for workers and/or testing laboratory. The Contractor shall be held responsible for the maintenance and protection of all facilities to be provided during the duration of the Contract.
- 1.4 To conduct removal and proper disposal of structures and/or obstructions as indicated in the approved plans. All designated salvageable material shall be removed, without unnecessary damages, for safekeeping and turn-over to the end-user.
- 1.5 To properly and safely dispose all wastes generated during the construction phase.
- 1.6 To supervise or monitor the presence of the assigned Project Personnel (Project Engineer, Materials Engineer or Safety Officer) during project implementation.
- 1.7 To conduct site visits to familiarize with the on-site conditions and existing facilities.
- 1.8 To provide as-staked and as-built plans for the construction of Inspection Bays in one (1) set original CAD drawing in A3 size, one (1) additional copy, and electronic file of the following:
  - a. Architectural Drawings;
  - b. Structural Drawings;
  - c. Electrical Drawings;
  - d. Plumbing Drawings-HDPE Drums Rainwater Collector; and
  - e. All other details of the project that may be required.
- 1.9 As-built plans shall indicate the details specified in Section 1.8 in any scale not less than 1:100 meters
- 1.10 To submit weekly accomplishment reports during the duration of the Contract.
- 1.11 To shoulder all costs for power and water utilities to be used during the implementation of the project.
- 1.12 The contractor shall be responsible for all tests and engineering services required by the Specifications. The cost for inspection or test not required by the specifications but which are required by JHMC, will be borne by JHMC.
- 1.13 All tests shall be performed by accredited testing facilities and approved by JHMC, and shall be in accordance with the current standards of the American

- Society for testing and materials, otherwise specified by JHMC. Two (2) copies of the test procedures including results shall be furnished to JHMC.
- 1.14 To immediately report to JHMC all unearthed hazardous materials, buried treasures or artifacts, and shall be coordinated by JHMC to the concerned agencies for their appropriate action. All activities in area of concern shall cease until such time that the hazardous materials, treasures have been properly dealt with.

## **2. DPWH STANDARDS and SPECIFICATIONS**

The scope of work shall be in conformity with of the DPWH standards and specifications.

### **ITEM 102 – EXCAVATION**

#### **102.1 Description**

This Item shall consist of roadway drainage and borrow excavation, and the disposal of material in accordance with this Specification and in conformity with the lines, grades and dimensions shown on the Plans or established by the Engineer.

##### **102.1.1 Roadway Excavation**

Roadway excavation will include excavation and grading for roadways, parking areas, intersections, approaches, slope rounding, benching, waterways and ditches; removal of unsuitable material from the roadbed and beneath embankment areas; and excavating selected material found in the roadway as ordered by the Engineer for specific use in the improvement. Roadway excavation will be classified as "unclassified excavation", "rock excavation", "common excavation", or "muck excavation" as indicated in the Bill of Quantities and hereinafter described.

- (1) **Unclassified Excavation.** Unclassified excavation shall consist of the excavation and disposal of all materials regardless of its nature, not classified and included in the Bill of Quantities under other pay items.
- (2) **Rock Excavation.** Rock excavation shall consist of excavation of igneous, sedimentary and metamorphic rocks which cannot be excavated without blasting or the use of rippers, and all boulders or other detached stones each having a volume of 1 cubic meter or more as determined by physical measurements or visually by the Engineer.
- (3) **Common Excavation.** Common excavations shall consist of all excavation not included in the Bill of Quantities under "rock excavation" or other pay items.
- (4) **Muck Excavation.** Muck excavation shall consist of the removal and disposal of deposits of saturated or unsaturated mixtures of soils and organic matter not suitable for foundation materials regardless of moisture content.

### **102.1.2 Borrow Excavation**

Borrow excavation shall consist of the excavation and utilization of approved materials required for the construction of embankments or for other portions of the work, and shall be obtained from approved sources, in accordance with Clause 61, Standard Specifications for Public Works and Highways, Volume I and the following:

(1) Borrow, Case 1

Borrow Case 1 will consist of material obtained from sources designated on the Plans or in the Special Provisions.

(2) Borrow, Case 2

Borrow Case 2 will consist of material obtained from sources provided by the Contractor. The material shall meet the quality requirements determined by the Engineer unless otherwise provided in the Contract.

### **102.2 Construction Requirements**

#### **102.2.1 General**

When there is evidence of discrepancies on the actual elevations and that shown on the Plans, a pre-construction survey referred to the datum plane used in the approved Plan shall be undertaken by the Contractor under the control of the Engineer to serve as basis for the computation of the actual volume of the excavated materials.

All excavations shall be finished to reasonably smooth and uniform surfaces. No materials shall be wasted without authority of the Engineer. Excavation operations shall be conducted so that material outside of the limits of slopes will not be disturbed. Prior to excavation, all necessary clearing and grubbing in that area shall have been performed in accordance with Item 100, Clearing and Grubbing.

#### **102.2.2 Conservation of Topsoil**

Where provided for on the Plans or in the Special Provisions, suitable topsoil encountered in excavation and on areas where embankment is to be placed shall be removed to such extent and to such depth as the Engineer may direct. The removed topsoil shall be transported and deposited in storage piles at locations approved by the Engineer. The topsoil shall be completely removed to the required depth from any designated area prior to the beginning of regular excavation or embankment work in the area and shall be kept separate from other excavated materials for later use.

#### **102.2.3 Utilization of Excavated Materials**

All suitable materials removed from the excavation shall be used in the formation of the embankment, subgrade, shoulders, slopes, bedding, and backfill for structures, and for other purposes shown on the Plans or as directed.

The Engineer will designate as unsuitable those soils that cannot be properly compacted in embankments. All unsuitable materials shall be disposed off as shown on the Plans or as directed without delay to the Contractor.

Only approved materials shall be used in the construction of embankments and backfills.

All excess materials, including rock and boulders that cannot be used in embankments shall be disposed off as directed.

Materials encountered in the excavation and determined by the Engineer as suitable for topping, road finishing, slope protection, or other purposes shall be conserved and utilized as directed by the Engineer.

Borrow materials shall not be placed until after the readily accessible materials from roadway excavation has been placed in the fill, unless otherwise permitted or directed by the Engineer. If the Contractor places more borrow than is required and thereby causes a waste of excavation, the amount of such waste will be deducted from the borrow volume.

#### **102.2.4 Prewatering**

Excavation areas and borrow pits may be prewatered before excavating the material. When prewatering is used, the areas to be excavated shall be moistened to the full depth, from the surface to the bottom of the excavation. The water shall be controlled so that the excavated material will contain the proper moisture to permit compaction to the specified density with the use of standard compacting equipment. Prewatering shall be supplemented where necessary, by truck watering units, to ensure that the embankment material contains the proper moisture at the time of compaction.

The Contractor shall provide drilling equipment capable of suitably checking the moisture penetration to the full depth of the excavation.

#### **102.2.5 Presplitting**

Unless otherwise provided in the Contract, rock excavation which requires drilling and shooting shall be presplit.

Presplitting to obtain faces in the rock and shale formations shall be performed by: (1) drilling holes at uniform intervals along the slope lines, (2) loading and stemming the holes with appropriate explosives and stemming material, and (3) detonating the holes simultaneously.

Prior to starting drilling operations for presplitting, the Contractor shall furnish the Engineer a plan outlining the position of all drill holes depth of drilling, type of explosives to be used, loading pattern and sequence of firing. The drilling and blasting plan is for record purposes only and will not absolve the Contractor of his responsibility for using proper drilling and blasting procedures. Controlled blasting shall begin with a short test section of a length approved by the Engineer. The test section shall be presplit, production drilled and blasted and sufficient material excavated whereby the Engineer can determine if the Contractor's methods are

satisfactory. The Engineer may order discontinuance of the presplitting when he determines that the materials encountered have become unsuitable for being presplit.

The holes shall be charged with explosives of the size, kind, strength, and at the spacing suitable for the formations being presplit, and with stemming material which passes a 9.5 mm standard sieve and which has the qualities for proper confinement of the explosives.

The finished presplit slope shall be reasonably uniform and free of loose rock. Variance from the true plane of the excavated backslope shall not exceed 300 mm; however, localized irregularities or surface variations that do not constitute a safety hazard or an impairment to drainage courses or facilities will be permitted.

A maximum offset of 600 mm will be permitted for a construction working bench at the bottom of each lift for use in drilling the next lower presplitting pattern.

#### **102.2.6 Excavation of Ditches, Gutters, etc.**

All materials excavated from side ditches and gutters, channel changes, irrigation ditches, inlet and outlet ditches, toe ditches, furrow ditches and such other ditches as may be designated on the Plans or staked' by the Engineer, shall be utilized as provided in Subsection 102.2.3.

Ditches shall conform to the slope, grade, and shape of the required cross-section, with no projections of roots, stumps, rock, or similar matter. The Contractor shall maintain and keep open and free from leaves, sticks, and other debris all ditches dug by him until final acceptance of the work.

Furrow ditches shall be formed by plowing a continuous furrow along the line staked by the Engineer. Methods other than plowing may be used if acceptable to the Engineer. The ditches shall be cleaned out by hand shovel work, by ditcher, or by some other Suitable method, throwing all loose materials on the downhill side so that the bottom of the finished ditch shall be approximately 450 mm below the crest of the loose material piled on the downhill side. Hand finish will not be required, but the flow lines shall be in satisfactory shape to provide drainage without overflow.

#### **102.2.7 Excavation of Roadbed Level**

Rock shall be excavated to a depth of 150 mm below subgrade within the limits of the roadbed, and the excavation backfilled with material designated on the Plans or approved by the Engineer and compacted to the required density.

When excavation methods employed by the Contractor leave undrained pockets in the rock surface, the Contractor shall at his own expense, properly drain such depressions or when permitted by the Engineer fill the depressions with approved impermeable material.

Material below subgrade, other than solid rock shall be thoroughly scarified to a depth of 150 mm and the moisture content increased or reduced, as necessary, to bring the



material throughout this 150 mm layer to the moisture content suitable for maximum compaction. This layer shall then be compacted in accordance with Subsection 104.3.3.

### **102.2.8 Borrow Areas**

The Contractor shall notify the Engineer sufficiently in advance of opening any borrow areas so that cross-section elevations and measurements of the ground surface after stripping may be taken, and the borrow material can be tested before being used. Sufficient time for testing the borrow material shall be allowed.

All borrow areas shall be bladed and left in such shape as to permit accurate measurements after excavation has been completed. The Contractor shall not excavate beyond the dimensions and elevations established, and no material shall be removed prior to the staking out and cross-sectioning of the site. The finished borrow areas shall be approximately true to line and grade established and specified and shall be finished, as prescribed in Clause 61, Standard Specifications for Public Works and Highways, Volume 1. When necessary to remove fencing, the fencing shall be replaced in at least as good condition as it was originally. The Contractor shall be responsible for the confinement of livestock when a portion of the fence is removed.

### **102.2.9 Removal of Unsuitable Material**

Where the Plans show the top portion of the roadbed to be selected topping, all unsuitable materials shall be excavated to the depth necessary for replacement of the selected topping to the required compacted thickness.

Where excavation to the finished graded section results in a subgrade or slopes of unsuitable soil, the Engineer may require the Contractor to remove the unsuitable material and backfill to the finished graded section with approved material. The Contractor shall conduct his operations in such a way that the Engineer can take the necessary cross-sectional measurements before the backfill is placed.

The excavation of muck shall be handled in a manner that will not permit the entrapment of muck within the backfill. The material used for backfilling up to the ground line or water level, whichever is higher, shall be rock or other suitable granular material selected from the roadway excavation, if available. If not available, suitable material shall be obtained from other approved sources. Unsuitable material removed shall be disposed off in designated areas shown on the Plans or approved by the Engineer.

### **102.3 Method of Measurement**

The cost of excavation of material which is incorporated in the Works or in other areas of fill shall be deemed to be included in the Items of Work where the material is used.

Measurement of Unsuitable or Surplus Material shall be the net volume in its original position.

For measurement purposes, surplus suitable material shall be calculated as the difference between the net volume of suitable material required to be used in embankment corrected by applying a shrinkage factor or a swell factor in case of rock excavation, determined by laboratory tests to get its original volume measurement, and the net volume of suitable material from excavation in the original position. Separate pay items shall be provided for surplus common, unclassified and rock material.

The Contractor shall be deemed to have included in the contract unit prices all costs of obtaining land for the disposal of unsuitable or surplus material.

#### **102.4 Basis of Payment**

The accepted quantities, measured as prescribed in Section 102.3 shall be paid for at the contract unit price for each of the Pay Items listed below that is included in the Bill of Quantities which price and payment shall be full compensation for the removal and disposal of excavated materials including all labor, equipment, tools, and incidentals necessary to complete the work prescribed in this Item.

### **ITEM 404 – REINFORCING STEEL**

#### **404.1 Description**

This Item shall consist of furnishing, bending, fabricating and placing of steel reinforcement of the type, size, shape and grade required in accordance with this Specification and in conformity with the requirements shown on the Plans or as directed by the JHMC representative.

#### **404.2 Material Requirements**

Reinforcing steel shall meet the requirements of item 710, Reinforcing Steel and Wire Rope.

#### **404.3 Construction Requirements**

##### **404.3.1 Order Lists**

Before materials are ordered, all order lists and bending diagrams shall be furnished by the Contractor, for approval of the JHMC representative. The approval of order lists and bending diagrams by the JHMC representative shall in no way relieve the Contractor of responsibility for the correctness of such lists and diagrams. Any expense incident to the revisions of materials furnished in accordance with such lists and diagrams to make them comply with the Plans shall be borne by the Contractor.

### 404.3.2 Protection of Material

Steel reinforcement shall be stored above the surface of the ground upon platforms, skids, or other supports and shall be protected as far as practicable from mechanical injury and surface deterioration caused by exposure to conditions producing rust. When placed in the work, reinforcement shall be free from dirt, detrimental rust, loose scale, paint, grease, oil, or other foreign materials. Reinforcement shall be free from injurious defects such as cracks and laminations. Rust, surface seams, surface irregularities or mill scale will not be cause for rejection, provided the minimum dimensions, cross sectional area and tensile properties of a hand wire brushed specimen meets the physical requirements for the size and grade of steel specified.

### 404.3.3 Bending

All reinforcing bars requiring bending shall be cold-bent to the shapes shown on the Plans or required by the JHMC representative. Bars shall be bent around a circular pin having the following diameters (D) in relation to the diameter of the bar (d):

Nominal diameter,	Pin diameter
10 to 20	6d
25 to 28	8d
32 and greater	10d

Bends and hooks in stirrups or ties may be bent to the diameter of the principal bar enclosed therein.

### 404.3.4 Placing and Fastening

All steel reinforcement shall be accurately placed in the position shown on the Plans or required by the JHMC representative and firmly held there during the placing and setting of the concrete. Bars shall be tied at all intersections except where spacing is less than 300mm in each directions, in which case, alternate intersections shall be tied. Ties shall be fastened on the inside.

Distance from the forms shall be maintained by means of stays, blocks, ties, hangers, or other approved supports, so that it does not vary from the position indicated on the Plans by more than 6mm. Blocks for holding reinforcement from contact with the forms shall be precast mortar blocks of approved shapes and dimensions. Layers of bars shall be separated by precast mortar blocks or by other equally suitable devices. The use of pebbles, pieces of broken stone or brick, metal pipe and wooden blocks shall not be permitted. Unless otherwise shown on the Plans or required by the JHMC representative, the minimum distance between bars shall be 40mm. Reinforcement in any member shall be placed and then inspected and approved by the JHMC representative before the placing of concrete begins. Concrete placed in violation of this provision may be rejected and removal may be required. If fabric reinforcement is shipped in rolls, it shall be straightened before being placed. Bundled bars shall be tied together at not more than 1.8m intervals.

### 404.3.5 Splicing

All reinforcement shall be furnished in the full lengths indicated on the Plans. Splicing of bars except where shown on the Plans will not be permitted without the written approval of the JHMC representative. Splices shall be staggered as far as possible and with a minimum separation of not less than 40 bar diameters. Not more than one-third of the bars may be spliced in the same cross-section, except where shown on the Plans.

Unless otherwise shown on the Plans, bars shall be lapped a minimum distance of:

Splice Type	Grade 40 min. lap	Grade 60 min. lap	But not less than
Tensi	24 bar dia	36 bar dia	300 mm
Comp	20 bar dia	24 bar dia	300 mm

In lapped splices, the bars shall be placed in contact and wired together. Lapped splices will not be permitted at locations where the concrete section is insufficient to provide minimum clear distance of one and one-third the maximum size of coarse aggregate between the splice and the nearest adjacent bar. Welding of reinforcing steel shall be done only if detailed on the Plans or if authorized by the JHMC representative in writing. Spiral reinforcement shall be spliced by lapping at least one and a half turns or by butt welding unless otherwise shown on the Plans.

### 404.4 Method of Measurement

The quantity of reinforcing steel to be paid for will be the final quantity placed and accepted in the completed structure.

No allowance will be made for tie-wires, separators, wire chairs and other material used in fastening the reinforcing steel in place. If bars are substituted upon the Contractor's request and approved by the JHMC representative and as a result thereof more steel is used than specified, only the mass specified shall be measured for payment.

No measurement or payment will be made for splices added by the Contractor unless directed or approved by the JHMC representative.

When there is no item for reinforcing steel in the Bill of Quantities, costs will be considered as incidental to the other items in the Bill of Quantities.

### 404.5 Basis of Payment

The accepted quantity, measured as prescribed in Section 404.4, shall be paid for at the contract unit price for Reinforcing Steel which price and payment shall be full compensation for furnishing and placing all materials, including all labor, equipment, tools and incidentals necessary to complete the work prescribed in this Item.

## **ITEM 405 – STRUCTURAL CONCRETE**

### **405.1 Description**

#### **405.1.1 Scope**

This Item shall consist of furnishing, bending, placing and finishing concrete in all structures except pavements in accordance with this Specification and conforming to the lines, grades, and dimensions shown on the Plans. Concrete shall consist of a mixture of Portland Cement, fine aggregate, coarse aggregate, admixture when specified, and water mixed in the proportions specified or approved by the JHMC representative.

#### **405.1.2 Classes and Uses of Concrete**

The classes of concrete will generally be used as follows:

**Class A** – All superstructures and heavily reinforced substructures. The important parts of the structure included are slabs, beams, girders, columns, arch ribs, box culverts, reinforced abutments, retaining walls, and reinforced footings.

**Class B** – Footings, pedestals, massive pier shafts, pipe bedding, and gravity walls, unreinforced or with only a small amount of reinforcement.

### **405.2 Material Requirements**

#### **405.2.1 Portland Cement**

It shall conform to all the requirements of Subsection 311.2.1.

#### **405.2.2 Fine Aggregate**

It shall conform to all the requirements of Subsection 311.2.2.

#### **405.2.3 Coarse Aggregate**

It shall conform to all the requirements of Subsection 311.2.3 except that gradation shall conform to Table 405.1.

**Table 405.1 – Grading Requirements for Coarse Aggregate**

Sieve Designation		Mass Percent Passing				
Standard Mm	Alternate US	Class A	Class B	Class C	Class P	Class Seal

63	2-1/2"		100			
50	2"	100	95 -			
37.5	1-1/2"	95 - 100	100			100
25	1"	-	-		100	95 - 100
19.0	3/4"	35 - 70	35 - 70	100	95 -	-
12.5	1/2"	-	-	90 -	100	25 - 60
9.5	3/8"	10 - 30	10 - 30	100	-	-
4.75	No.4	0 - 5	-	40 - 70	20 -	0 - 10*
			0 - 5	0 - 15*	55	

- *The measured cement content shall be within plus (+) or minus (-) 2 mass percent of the design cement content.*

#### 405.2.4 Water

It shall conform to the requirements of Subsection 311.2.4

#### 405.2.5 Reinforcing Steel

It shall conform to the requirements of Item 710, Reinforcing Steel and Wire Rope.

#### 405.2.11 Storage of Cement and Aggregates

Storage of cement and aggregates shall conform to all the requirements of Subsection 311.2.10.

#### 405.3 Sampling and Testing of Structural Concrete

As work progresses, at least one (1) sample consisting of three (3) concrete cylinder test specimens, 150 x 300mm (6 x 12 inches), shall be taken from each seventy-five (75) cubic meters of each class of concrete or fraction thereof placed each day.

Compliance with the requirements of this Section shall be determined in accordance with the following standard methods of AASHTO:

Sampling of fresh concrete	T 141
Weight per cubic meter and air content (gravi- Metric) of concrete	T 121
Sieve analysis of fine and coarse aggregates	T 27
Slump of Portland Cement Concrete	T 119
Specific gravity and absorption of fine aggregate	T 84

Tests for strength shall be made in accordance with the following:

Making and curing concrete compressive and flexural tests specimens in the field T 23

Compressive strength of molded concrete Cylinders T 22

#### 405.4 Production Requirements

##### 405.4.1 Proportioning and Strength of Structural Concrete

The concrete materials shall be proportioned in accordance with the requirements for each class of concrete as specified in Table 405.2, using the absolute volume method as outlined in the American Concrete Institute (ACI) Standard 211.1. "Recommended Practice for Selecting Proportions for Normal and Heavy weight Concrete". Other methods of proportioning may be employed in the mix design with prior approval of the JHMC representative. The mix shall either be designed or approved by the JHMC representative. A change in the source of materials during the progress of work may necessitate a new mix design.

The strength requirements for each class of concrete shall be as specified in Table 405.2.

**Table 405.2 - Composition and Strength of Concrete for Use in Structures**

Class Of Concrete	Minimum Cement Content Per m <sup>3</sup> kg (bag**)	Maximum Water/Cement Ratio kg/kg	Consistency Range in Slump mm (inch)	Designated Size of Coarse Aggregate Square Opening Std. mm	Minimum Compressive Strength of 150x300mm Concrete Cylinder Specimen at 28 days,
A	360 (9 bags)	0.53	50 – 100 (2 – 4)	37.5 – 4.75 (1-1/2" – No. 4)	20.7 (3000)
B	320 (8 bags)	0.58	50 – 100 (2 – 4)	50 – 4.75 (2" – No. 4)	16.5 (2400)
C	380 (9.5 bags)	0.55	100 max. (4 max.)	12.5 – 4.75 (1/2" – No. 4)	20.7 (3000)
P	440 (11 bags)	0.49	100 – 200 (4 - 8)	19.0 – 4.75 (3/4" – No. 4)	37.7 (5000)

\* The measured cement content shall be within plus or minus 2 mass percent of the design cement content.

\*\* Based on 40 kg/bag

## **405.4.2 Consistency**

Concrete shall have a consistency such that it will be workable in the required position. It shall be of such a consistency that it will flow around reinforcing steel but individual particles of the coarse aggregate when isolated shall show a coating of mortar containing its proportionate amount of sand. The consistency of concrete shall be gauged by the ability of the equipment to properly place it and not by the difficulty in mixing and transporting. The quantity of mixing water shall be determined by the JHMC representative and shall not be varied without his consent. Concrete as dry as it is practical to place with the equipment specified shall be used.

## **405.4.4 Mixing and Delivery**

Concrete shall be mixed at the site of construction. Mixing of concrete shall be in accordance with the appropriate requirements of AASHTO M 157.

Concrete mixing, by chute is allowed provided that a weighing scales for determining the batch weight will be used.

Mixer having a rated capacity of less than a one-bag batch shall not be used. The volume of concrete mixed per batch shall not exceed the mixer's nominal capacity as shown on the manufacturer's standard rating plate on the mixer except that an overload up to 10 percent above the mixer's nominal capacity may be permitted, provided concrete test data for strength, segregation, and uniform consistency are satisfactory and provided no spillage of concrete takes place.

The mixer shall be operated at the drum speed as shown on the manufacturer's name plate on the mixer. Any concrete mixed less than the specified time shall be discarded and disposed-off by the Contractor at his own expenses.

The timing device on stationary mixers shall be equipped with a bell or other suitable warning device adjusted to give a clearly audible signal each time the lock is released. In case of failure of the timing device, the Contractor will be permitted to continue operations while it is being repaired, provided he furnishes an approved time piece equipped with minute and second hands. If the timing device is not placed in good working order within 24 hours further use of the mixer will be prohibited until repairs are made.

Retempering concrete will not be permitted. Admixtures for increasing the workability, for retarding the set, or for accelerating the set or improving the pumping characteristics of the concrete will be permitted only when specifically provided for in the Contract, or authorized in writing by the JHMC representative.

### **1. Mixing Concrete: General**

Concrete shall be thoroughly mixed in a mixer of an approved size and type that will insure a uniform distribution of the materials throughout the mass.



All concrete shall be mixed in mechanically operated mixers. The auxiliary supply of concrete shall be sufficient to complete the casting of a section up to a construction joint that will meet the approval of the JHMC representative.

Equipment having components made of aluminum or magnesium alloys, which would have contact with plastic concrete during mixing, transporting or pumping of Portland cement concrete, shall not be used.

Concrete mixers shall be equipped with adequate water storage and a device of accurately measuring and automatically controlling the amount of water used.

Materials shall be measured by weighing. The apparatus provided for weighing the aggregates and cement shall be suitably designed and constructed for this purpose.

The accuracy of all weighing devices except that for water shall be such that successive quantities can be measured to within one percent of the desired amounts. The water measuring device shall be accurate to plus or minus 0.5 mass percent. All measuring devices shall be subject to the approval of the JHMC representative. Scales and measuring devices shall be tested at the expense of the Contractor as frequently as the JHMC representative may deem necessary to insure their accuracy.

Weighing equipment shall be insulated against vibration or movement of other operating equipment in the plant. When the entire plant is running, the scale reading at cut-off shall not vary from the weight designated by the JHMC representative more than one mass percent for cement, 1-1/2 mass percent for any size of aggregate, or one (1) mass percent for the total aggregate in any batch.

## 2. Mixing Concrete at Site

Concrete mixers may be of the revolving drum or the revolving blade type and the mixing drum or blades shall be operated uniformly at the mixing speed recommended by the manufacturer. The pick-up and throw-over blades of mixers shall be restored or replaced when any part or section is worn 20mm or more below the original height of the manufacturer's design. Mixers and agitators which have an accumulation of hard concrete or mortar shall not be used.

When bulk cement is used and volume of the batch is 0.5m<sup>3</sup> or more, the scale and weigh hopper for Portland Cement shall be separate and distinct from the aggregate hopper or hoppers. The discharge mechanism of the bulk cement weigh hopper shall be interlocked against opening before the full amount of cement is in the hopper. The discharging mechanism shall also be interlocked against opening when the amount of cement in the hopper is underweight by more than one (1) mass percent or overweight by more than 3 mass percent of the amount specified.

When the aggregate contains more water than the quantity necessary to produce a saturated surface dry condition, representative samples shall be taken

and the moisture content determined for each kind of aggregate.

The batch shall be so charged into the mixer that some water will enter in advance of cement and aggregate. All water shall be in the drum by the end of the first quarter of the specified mixing time.

Cement shall be batched and charged into the mixer so that it will not result in loss of cement due to the effect of wind, or in accumulation of cement on surface of conveyors or hoppers, or in other conditions which reduce or vary the required quantity of cement in the concrete mixture.

The entire content of a batch mixer shall be removed from the drum before materials for a succeeding batch are placed therein. The materials composing a batch except water shall be deposited simultaneously into the mixer.

All concrete shall be mixed for a period of not less than 1-1/2 minutes after all materials, including water, are in the mixer. During the period of mixing, the mixer shall operate at the speed for which it has been designed.

Mixers shall be operated with an automatic timing device that can be locked by the JHMC representative. The time device and discharge mechanics shall be so interlocked that during normal operation no part of the batch will be charged until the specified mixing time has elapsed.

The first batch of concrete materials placed in the mixer shall contain a sufficient excess of cement, sand, and water to coat inside of the drum without reducing the required mortar content of the mix. When mixing is to cease for a period of one hour or more, the mixer shall be thoroughly cleaned.

#### **405.5 Method of Measurement**

The quantity of structural concrete to be paid for will be the final quantity placed and accepted in the completed structure. No deduction will be made for the volume occupied by pipe less than 100mm (4 inches) in diameter or by reinforcing steel, anchors, conduits, weep holes or expansion joint materials.

#### **405.6 Basis of Payment**

The accepted quantities, measured as prescribed in Section 405.5, shall be paid for at the contract unit price for each of the Pay Item listed below that is included in the Bill of Quantities.

Payment shall constitute full compensation for furnishing, placing and finishing concrete including all labor, equipment, tools and incidentals necessary to complete the work prescribed in the item.

## **ITEM 411 - PAINT**

### **411.1 Description**

This Item shall consist of furnishing and applying all paint materials including vehicles, pigments, pastes, driers, thinners and mixed paints for steel and wooden structures; sampling, testing and packing; preparation of the surface and application of paint to structures.

### **411.2 Materials Requirements**

#### **411.2.1 General**

Paint, except aluminum paint, shall consist of pigments of the required fineness and composition ground to the desired consistency in linseed oil in a suitable grinding machine, to which shall be added additional oil, thinner and drier as required.

Aluminum paint shall consist of aluminum powder or paste of the required fineness and composition to which shall be added the specified amount of vehicle.

The paint shall be furnished for use in ready mixed, paste or powder form

All paints shall meet the following general requirements:

1. The paint shall show no excessive settling and shall easily redisperse with a paddle to a smooth, homogeneous state. The paint shall show no curdling, livering, caking or color separation and shall be free from lumps and skins.
2. The paint as received shall brush easily, possess good leveling properties and shall show no running or sagging when applied to a smooth vertical surface.
3. The paint shall dry to a smooth uniform finish, free from roughness grit, unevenness and other imperfections.
4. The paint shall not skin within 48 hours in a  $\frac{3}{4}$  filled tightly closed container.

**411.2.2** The paint shall conform to the requirements of the Specifications indicated as follows:

Ready Mixed Red Lead Paint Aluminum Paint	AASHTO M 72 and <b>PNS</b> Type I, II, III & IV MSHTO M 69 and <b>PNS</b> Type I & II
White & Tinted Ready Mixed Paint	MSHTO M 70
Foliage Green Bridge Paint	MSHTO M 67

Black Paint for Bridges and Timber Structures Basic Lead-Silica- Chromate Ready Mixed Primer Ready Mixed Aluminum Paint	MSHTO M 68  MSHTO M 229 AASHTO M 260 and PNS
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### 411.2.3 Drier

This Specification covers both straight oil drier (material free from resins and gums), and Japan drier (material containing varnish gums). The drier shall be composed of lead manganese or cobalt or a mixture of any of these elements, combined with a suitable fatty oil, with or without resins or gums, and mineral spirits or turpentine, or a mixture of these solvents. The drier shall conform to the following requirements:

1. Appearance - Free from sediment and suspended matter.
2. Flash Point- (Tag Close Up) Not less than 30°C.
3. Elasticity - The drier when flowed on metal and baked for 2 hours at 100°C shall have an elastic film.
4. Drying - It shall mix with pure raw linseed oil in the proportion of 1 volume of drier to 19 volume of oil without curdling and the resulting mixture when flowed on glass shall dry in not more than 18 hours.
5. Color - When mixed with pure, raw linseed oil in the proportion of 1 volume of drier to 8 volume of oil, the resulting mixture shall be darker than a solution of 6 grams of Potassium Dichromate in 13 cc of pure Sulfuric Acid (sp.gr. 1.84).

### 411.3 Construction Requirements

#### 411.3.1 Proportion of Mixing

It is the intent of this Specification to provide a paint of proper brushing consistency, which will not run, streak or sag and which will have satisfactory drying qualities.

#### 411.3.2 Aluminum Paint, Field Coats on Structural Steel

The paint shall be mixed in the proportion of 240 grams of aluminum powder or paste per liter of vehicle of long oil spar varnish. This makes a paint containing 21 percent pigment and 79 percent vehicle. The weighed amount of powder or paste shall be placed in a suitable mixing container and the measured volume of vehicle poured over it. The paste or powder shall be incorporated in the paint by vigorous stirring with a paddle. The powder or paste will readily disperse in the vehicle. Before removing any paint from the container, the paint shall be thoroughly stirred to insure a uniform mixture, and the paint shall be suitably

stirred during use. The paint shall be mixed on the job and only enough for one day's use shall be mixed at one time.

When two field coats of aluminum paint are specified, the first coat shall be tinted with lampblack paste or Prussian blue paste in the quantity of 240 grams/liter of paint. The exact quantity used shall be sufficient to give a contrast in color which can be readily distinguished. When three field coats of aluminum paint are specified, the second coat shall be tinted.

#### **411.3.3 Aluminum Paint, Field Coats on Creosoted Timber**

The paint shall be mixed as specified for Aluminum Paint for Structural Steel except that the proportions shall be 270 grams of aluminum powder or paste to one liter of vehicle.

Other paint composition may be used when and as stipulated in the Special Provisions.

#### **411.3.4 Containers and Markings**

All paints shall be shipped to strong substantial containers plainly marked with the weight, color and volume in liters of the paint content, a true statement of the percentage composition of the pigment, the proportions of the pigment to vehicle, the name and address of the manufacturers, and the stencil of the authorized inspecting agency. Any package or container not so marked will not be accepted for use.

#### **411.3.5 Sampling and Testing**

Method of sampling shall be as follows:

1. One 20-liter can sample in original unopened container shall be obtained for 100 cans of the delivered material or 10% fraction thereof.
2. One 4-liter can sample in original unopened container shall be obtained for every 100 cans or fraction thereof of the delivered material.

Methods of testing will be in accordance with the applicable AASHTO or ASTM Methods.

#### **411.3.6 Painting**

The painting of structure shall include the proper preparation of the surface; the application, protection and drying of the paint coatings, the protection of the pedestrians, vehicular or other traffic upon or underneath the structures, the protection of all parts of the structure (both superstructure and substructure) against disfigurement by spatters, splashes and smirches of paint or of paint

materials; and the supplying of all tools, tackle, scaffolding, labor, paint and materials necessary for the entire work.

Paint shall not be applied during rain, storms or when the air is misty, or when, in the opinion of the Engineer, conditions are otherwise unsatisfactory for the work. Paint shall not be applied upon damp surfaces or upon metal which has absorbed heat sufficient to cause the paint to blister and produce a pervious paint film.

No wide flat brush shall be used. All brushes preferably shall be either round or oval but if flat brushes are used, they shall not exceed 100 mm in width.

The paint when applied shall be so manipulated as to produce a uniform even coating in close contact with the surface being painted, and shall be worked into all corners and crevices.

On surfaces inaccessible to brushes, the paint shall be applied by spray gun or with sheepskin daubers specially constructed for the purposes.

Paint shall be thoroughly stirred, preferably by means of mechanical mixers, before being removed from the containers, and, to keep the pigments in suspension, shall be kept stirred while being applied.

When a paint gun is used, the equipment used shall be of an approved type and shall have provision for agitation of paint in the spray container. In the case of aluminum paint, the pressure used shall be only that necessary to secure adequate atomization. If in the opinion of the Engineer unsatisfactory results are obtained from the use of a spray gun, its use shall be discontinued and the painting completed by the use of brushes.

#### **411.3.6.2      Painting Structural Steel**

Surfaces of metals to be painted shall be thoroughly cleaned of rust, loose mill, scale, dirt, oil or grease, and other foreign substances. Unless cleaning is to be done by sandblasting, all weld areas, before cleaning is begun, shall be neutralized with a proper chemical, after which they shall be thoroughly rinsed with water. Cleaning may be by any of the following three methods:

##### **1. Hand Cleaning**

The removal of rust, scale and dirt shall be done by the use of metal brushes, scrapers, chisels, hammers or other effective means. Oil and grease shall be removed by the use of gasoline or benzene. Bristle or wood fiber brushes shall be used for removing loose dust.

##### **2. Sandblasting**

Sandblasting shall remove all scale and other substances down to the base metal. Special attention shall be given to the cleaning of corners and reentrant angles.

Before painting, sand adhering to the steel in corners and elsewhere shall be removed. The cleaning shall be approved by the Engineer prior to any painting. The material shall be painted before the rust forms and not later than 2 hours after cleaning.

### 3. Flame Cleaning

Oil and grease shall be removed by washing with suitable solvent. Excess solvent shall be wiped from the work before proceeding with subsequent operation. The surface to be painted shall be cleaned and dehydrated (freed of occluded moisture) by the passage of oxyacetylene flames which have an oxygen to acetylene of at least one. The inner cones of these flames shall have a ratio length to port diameter of at least 8 and shall not be more than 4 mm center to center. The oxyacetylene flames shall be traversed over the surface of the steel in such manner and at such speed that the surface is dehydrated, and dirt, rust, loose scale, scale in the form of blisters or scabs, and similar foreign matter are freed by the rapid intense heating by the flames. The flames shall not be traversed so slowly that loose scale or other foreign matter is fused to the surface of the steel. The number, arrangement and manipulation of the flames shall be such that all parts of the surface are adequately cleaned and dehydrated. Promptly after the application of the flames, the surface of the steel shall be wire-brushed, hand scraped wherever necessary and then swept and dusted to remove all free materials and foreign particles. Compressed air shall not be used for this operation. Paint shall be applied promptly after the steel has been cleaned and while the temperature of the steel is still above that of the surrounding atmosphere, so that there will be no recondensation of moisture on the cleaned surfaces.

### 4. Shop Painting of Structural Steel

When all fabrication work is completed and has been tentatively accepted, all surfaces not painted before assembling shall be given two coats of Red Lead Shop Paint conforming to the requirements of this Specification. (The inside of top chords for trusses and laced members or inaccessible parts, except contact surfaces, may be painted before assembling). Shipping pieces shall not be located for shipment until thoroughly dry. No painting shall be done after loading the materials on transport vehicles.

Erection marks for field identifications of members shall be painted upon previously painted surfaces.

With the exception of abutting joints and base plates, machine-finished surface shall be coated, as soon as practicable after acceptance with a hot mixture of white lead and tallow before removal from the shop. The composition used for coating machine-finished surface shall be mixed in the following proportions:

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Pure Tallow	Pure	
White Lead		1,915 grams

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## 5. Field Painting of Structural Steel

When the erection work is complete including riveting and straightening of bent metal; all adhering rust, scale, dirt, grease or other foreign material shall be removed as specified under cleaning of surfaces.

As soon as the Engineer has examined and approved all field rivets, the heads of such rivets and field bolts, all welds and any surfaces from which the shop coat of paint has become worn off or has otherwise become defective, shall be cleaned and thoroughly covered with one coat of shop coat paint.

When the paint applied for "touching up" rivet heads and abraded surfaces has become thoroughly dry, such field coats as called for shall be applied. In no case shall a succeeding coat be applied until the previous coat has dried throughout the full thickness of the film. All small cracks and cavities which were not sealed in water-tight manner by the first field coat shall be filled with a pasty mixture of red lead and linseed oil before the second field coat is applied.

The following provisions shall apply to the application of all field coats. To secure a maximum coating on edges of plates or hapes, rivet heads and other parts subjected to special wear and attack, these parts shall first be stripped, followed immediately by the general painting of the whole surface, including the edges and rivet heads.

The application of the final coats shall be deferred until adjoining concrete work has been placed and finished. If concreting operations have damaged that paint, the surface shall be recleaned and repainted.

### **411.3.6.4 Painting Galvanized Surface**

For the purpose of conditioning the surface of galvanized surfaces to be painted, the painting shall be deferred as long as possible in order that the surface may weather.

Before painting galvanized surfaces they shall be treated as follows:

1. In 4 liters of soft water, dissolve 60 ml of copper chloride, copper nitrate, and sal ammonia, then add 60 ml of commercial muriatic acid. This should be done in earthenware or glass vessel, never in tin or other metal receptacle. Apply the solution with a wide flat brush to the galvanized surface, when it will assume a dark almost black color which on drying becomes a grayish film.

2. The surfaces, when dry, may then be painted as described.

### **411.3.6.5 Repainting Existing Structures**



When called for on the Plans or in the Special Provisions, existing structures shall be given the number and kind of coats of field paint as stipulated. The surface to be repainted shall be cleaned as specified under Subsection 411.3.6.2, Painting Structural Steel, with the added provisions that all dead or loose paint shall be removed by scraping, chipping, or brushing as may be necessary. Timber railings, name plates, planking and other interfering parts shall be removed before cleaning is begun and shall be replaced after the painting has been completed and the last coat has thoroughly dried. The application of the coat shall be as specified under Subsection 411.3.6.2, (5), Field Painting of Structural Steel.

#### **411.4 Measurement and Payment**

Painting shall not be measured and paid for separately, but the cost thereof shall be considered as included in the contract unit price of the Items where called for.

## *Section VII. Drawings*

*See attached*

## *Section VIII. Bill of Quantities*

Name: \_\_\_\_\_

In the capacity of: \_\_\_\_\_

Signed: \_\_\_\_\_

Duly authorized to sign the Bid for and on behalf of: \_\_\_\_\_

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

**GUIDELINES IN PREPARING THE DETAILED UNIT PRICE ANALYSIS (DUPA)**

1. All items of work to be used in preparing the DUPA shall be consistent with the design, plans and specifications prepared by JHMC.
2. For uniformity in the preparation of the Financial Proposal, the DUPA shall be an integral part of the Bidding Documents.
3. All bids shall be composed of the Direct Cost and Indirect Cost.
  - 3.1. DIRECT COST.
    - 3.1.1. MATERIAL COST. Cost of materials to be used in doing the work item called for, which shall include, among others, the following:
      - 3.1.1.1. Cost at source, including processing, crushing, stockpiling, loading, royalties, local taxes, construction and/or maintenance of haul roads, etc.
      - 3.1.1.2. Expenses for hauling to project site.
      - 3.1.1.3. Handling expenses.
      - 3.1.1.4. Storage expenses.
      - 3.1.1.5. Allowance for waste and/or losses.
    - 3.1.2. LABOR COST.
      - 3.1.2.1. Salaries and wages, as authorized by the Department of Labor and Employment.
      - 3.1.2.2. Fringe benefits, such as vacation and sick leaves, benefits under the Workmen's Compensation Act, SSS contributions, allowances, 13th month pay, bonuses, etc.
    - 3.1.3. EQUIPMENT EXPENSES.
      - 3.1.3.1. Rental rates of equipment shall be based on the prevailing "Association of Carriers and Equipment Lessors, (ACEL) Inc." approved for use by the DPWH-CAR. Rental rates of equipment not indicated in the ACEL booklet shall be taken from the rental rates used by the proponent. The make, model and capacity of the equipment should be indicated in the detailed unit cost analysis.
      - 3.1.3.2. Mobilization and demobilization shall be treated as a separate pay item. It shall be computed based on the equipment requirements of the project stipulated in the bidder's proposal.
  - 3.2. INDIRECT COST.
    - 3.2.1. Overhead.
      - 3.2.1.1. Cost to cover power and water consumption and office supplies.
      - 3.2.1.2. Premium on Contractor's All Risk Insurance (CARI).
    - 3.2.2. Contingencies. These includes expenses for coordination meetings, ground breaking, inauguration ceremonies and other unforeseen events.
    - 3.2.3. Miscellaneous Expenses. Expenses for laboratory tests for quality control.
    - 3.2.4. Contractor's Profit.

## Notes:

1. All sub-items under the General Requirements shall not be subjected to OCM mark-up.
2. The following items under the General Requirements shall not be subjected to Contractor's profit mark-up:
  - a) Mobilization and Demobilization; and
  - b) Permits and clearances

**CONSTRUCTION OF INSPECTION**

**Project Name:** BAY AT GATES 1,2, and 4

**Location:** JHSEZ, Baguio City

**DETAILED UNIT PRICE ANALYSIS**

Item No.	General Requirements	Quantity	Unit	Unit Price	Amount
1					
1.1	Mobilization/Demobilization	1	Lot		
<div style="border: 1px solid black; padding: 2px;"> <p align="right">Direct Cost: (a+b+c)</p> <p align="right">Indirect Cost:</p> <p align="right">Contractor's Profit (Except Items 2.1 and 2.6)</p> <p align="right">Withholding</p> <p align="right">Taxes</p> <p align="right"><b>Sub-Total 1:</b> (Sum of Direct and Indirect Cost)</p> </div>					
Item No.	Item Description				
2	Sub-Item				
2.1	Description	Unit of Measure:			
a.	Labor	No. of Personnel	Daily Rate	No. of Working Days	Amount
	xxxxxxx	xx	xxxx.xx	xx	#VALUE!
			Total Labor Cost:		#VALUE!
b.	Equipment	No. of Unit/s	Daily Rate	No. of Working Days	Amount
	xxxxxxx	xx	xxxx.xx	xx	#VALUE!
			Total Equipment Rentals:		#VALUE!
c.	Materials	Quantity	Unit	Unit Price	Amount
	xxxxxxx	xx	xxxx.xx	xx	#VALUE!
			Total Material Cost:		#VALUE!
<div style="border: 1px solid black; padding: 2px;"> <p align="right">Direct Cost: (a+b+c)</p> <p align="right">Indirect Cost:</p> <p align="right">Overhead</p> <p align="right">Contingencies</p> <p align="right">Miscellaneous</p> <p align="right">Contractor's Profit</p> <p align="right">Withholding</p> <p align="right">Taxes</p> <p align="right"><b>Sub-Total 2.1:</b> (Sum of Direct and Indirect Cost)</p> </div>					
2.2	Sub-Item Description				
a.	Labor	No. of Personnel	Daily Rate	No. of Working Days	Amount

xxxxxxx	xx	xxxx.xx	xx	<u>#VALUE!</u>
b. Equipment	No. of Unit/s	Daily Rate	Total Labor Cost: No. of Working Days	<u>#VALUE!</u> Amount
xxxxxxx	xx	xxxx.xx	xx	<u>#VALUE!</u>
c. Materials	Quantity	Unit	Total Equipment Rentals: Unit Price	<u>#VALUE!</u> Amount
Materials	Quantity	Unit	Unit Price	Amount
xxxxxxx	xx	xxxx.xx	xx	<u>#VALUE!</u>
			Total Material Cost:	<u>#VALUE!</u>
Direct Cost: (a+b+c)				
Indirect Cost:				
Overhead				
Contingencies				
Miscellaneous				
Contractor's Profit				
Withholding Taxes				
<b>Sub-Total 2.2:</b> (Sum of Direct and Indirect Cost)				
Item 2. Total Cost: Item 2. Unit Cost:				

***Section IX. Checklist of Technical and Financial Documents***

# Checklist of Technical and Financial Documents

## I. TECHNICAL COMPONENT ENVELOPE

### *Class "A" Documents*

#### Legal Documents

- (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages);  
**or**
- (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;  
**and**
- (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;  
**and**
- (e) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

#### Technical Documents

- (f) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid; **and**
- (g) Statement of the bidder's Single Largest Completed Contract (SLCC) similar to the contract to be bid, except under conditions provided under the rules;  
**and**
- (h) Philippine Contractors Accreditation Board (PCAB) License;  
**or**  
Special PCAB License in case of Joint Ventures;  
**and** registration for the type and cost of the contract to be bid; **and**
- (i) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission;  
**or**  
Original copy of Notarized Bid Securing Declaration; **and**
- (j) Project Requirements, which shall include the following:
  - a. Organizational chart for the contract to be bid;
  - b. List of contractor's key personnel (e.g., Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
  - c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be; **and**
- (k) Original duly signed Omnibus Sworn Statement (OSS);



**and** if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

- (l) The prospective bidder's audited financial statements, showing, among others, the prospective bidder's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; **and**
- (m) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC).

**Class "B" Documents**

- (n) If applicable, duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence; **or**  
duly notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

**II. FINANCIAL COMPONENT ENVELOPE**

- (o) Original of duly signed and accomplished Financial Bid Form; **and**

Other documentary requirements under RA No. 9184

- (p) Original of duly signed Bid Prices in the Bill of Quantities; **and**
- (q) Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid; **and**
- (r) Cash Flow by Quarter.

