



**General Bid Bulletin No. 27**  
**04 October 2021**

**IFB No. 21-031-4**

**THE MALOLOS-CLARK RAILWAY PROJECT AND  
THE NORTH SOUTH RAILWAY PROJECT-SOUTH LINE (COMMUTER)  
PACKAGE CP NS-03: ROLLING STOCK-LIMITED EXPRESS TRAINSETS**

This General Bid Bulletin is issued to amend/clarify certain provisions in the Bidding Documents for the abovementioned project. Please refer to the attached Annexes of this General Bid Bulletin duly approved by the end-user and co-implementer for details:

1. **Annex "A"** –Answers to Queries from Prospective Bidders including clarifications to the Bidding Documents;
2. **Annex "B"**– Revisions to the Bidding Documents; and
3. **Annex "B – 1"** – Revised pages/amendments and final form as revised/amended.

All other portions of the Bidding Documents affected by these revisions, amendments and/or clarifications shall be made to conform to the same.

Revisions/amendments/clarifications made herein shall be considered an integral part of the Bidding Documents for this project.

For your information and guidance.

For the Bids and Awards Committee IV:

**SIGNATURE REDACTED**

**JOSEPH CONRAD D. DUEÑAS**  
*Chairperson*

# Annex A

**PACKAGE CP NS-03: ROLLING STOCK - LIMITED EXPRESS TRAINSETS**  
**General Bid Bulletin No. 27**  
**Annex A**

Item No.	Volume Section No. Page No. Clause No. / Title Reference Text	Clarification Request	Proposed Revised Text (if any)	Response
1.	Volume II Section VI ERG-60 8.8.3 Table: SIL associate with Rolling Stock safety functional requirements	The Bidder understands that allocated SILs for each safety requirement in this table are examples and can propose appropriate SILs for them according to our SIL assessment (SIL allocation) stipulated in ERG Clause 8.2. The Bidder assumes that some of them are excessive SIL allocation comparing with other projects. Please confirm the Bidder's understanding is correct.	N/A	Bidder understanding is correct. Bidder can propose alternative approach such as Japanese service proven approach/products instead of SIL allocation. Please see annex B.
2.	Volume II Section VI ERG-61 8.8.4.9 SIL certification GBB11 No.91	<p><i>The Contractor shall submit SIL certification for ISA approval and Engineer's review.</i></p> <p><i>GBB11 No.91</i>  <i>Dedicated SIL certification by a third-party body such as TUV for Rolling Stock design is not a mandatory requirement.</i></p> <p>It had been confirmed by DOTr in GBB #11 No. 91 that the dedicated SIL certification is not a mandatory requirement, however, the requirement of SIL certification has been added to ERG 8.8.4.9 as per GBB #24. The Bidder understands that SIL certification is not required as confirmed by DOTr before, and</p>	N/A	<p>Please see response provided on item 1.</p> <p>Employer response provided in GBB 11 no. 91 was responding to the bidder queries on the Contractor's scope provided a dedicated SIL certification by a thirdparty body such as TUV for Rolling stock design. The ISA which is entailed in clause 8.8.4.9 is implying to the ISA defined in clause</p>

		respectfully requests to remove this requirement of ERG clause 8.8.4.9.		8.11, the Employer appointed ISA.  Please see Annex B for updated clause 8.8.4.9.
3.	Volume II Section VI ERG-63 8.10.10.1	<i>For essential system works not limited to signaling, Rolling Stock, telecommunications and power supply system</i>  It is understood that the newly added requirements of ERG 8.10.10 are for the overall system of the MCRP and NSRP-S including, but not limited to, signaling, rolling stock, telecommunications and power supply system and therefore, the availability and reliability values specified in this clause can't be achieved by rolling stock solely. For that reason, please delete the requirements of ERG 8.10.10 entirely, or delete the values provided for service availability and reliability under ERG 8.10.10 1).	N/A	Section 8.10.10.1 (1) was updated. Please see Annex B.
4.	Volume II Section VI ERG-64 8.10.11 Rolling Stock	Based on the above, the Bidder understands that the rolling stock Contractor of CP NS-03 is required to achieve the values provided in ERG 8.10.11 for availability and reliability. Please confirm that the above understanding is correct. On the other hand, the Bidder considers that the availability target of 99.99% specified in ERG 8.10.11.2 is too excessive comparing with other projects. Therefore, please change the availability target from 99.99 % to 99.5%, which, we believe, is reasonable number based on numerous past records in Asian rolling stock market.	N/A	Bidder understanding is correct. Please be advised that the reliability and maintainability target are not changed. The availability shall be calculated using the formula provided in the 8.10.11.2.
5.	Volume II Section VI	<i>The availability target of one train shall be 99.99%.</i>	N/A	Bidder understanding is correct. The following

	ERG-63 8.10.11.2	In order for the Bidder to evaluate train service availability, please provide the operation and maintenance plan such as the train numbers to be in revenue service, the number of the spare train for revenue service and in maintenance. In addition, we understand that the availability value should be calculated by average of the availability of all 7 train sets, instead of by individually. Please clarify this understanding is correct.		information is for bidder reference only and they are subject to changes during project implementation.  <i>Service operation spare:1 train;</i> <i>Maintenance/cleaning spare :1train;</i> <i>Operation: 5 trains;</i>
6.	Volume II Section VI ERG-50, 51 8.14.13.1	<i>IEEE 1220 standard</i> <i>EIA 632 Systems Engineering</i>  Since the Bidder understands that the system engineering process is one of design management process established by ISO9001, it is not necessary to comply with IEEE 1220 and EIA 632. It is understood that IEEE 1220 and EIA 632 are specified as examples, however, the Bidder requests the Employer to delete this requirement as provided.	<del>Examples of suitable methodologies are:</del> <del>1) IEEE 1220 Standard for the Application and Management of the Systems Engineering Process</del> <del>2) EIA 632 Systems Engineering</del> The Contractor with consent of the Engineer may-can propose an-the alternative-suitable methodology.	Bidder is referring to clause 8.4.13.1. The clause will not be updated. As mentioned ERG8.4.13.1, the methodologies are meant for examples. The Contractor may propose the alternative methodology for the Systems Engineering Process (SEP).
7.	General Bid Bulletin No. 24, Annex B REVISIONS / AMENDMENTS, dated on 09 September 2021  Page 1 ITEM NO.4	The date for the exchange rate shall be: 21 August 2021. In the event of non-availability of exchange rate in the BSP website due to non-working days, the Bidder shall apply the exchange rate of the following working day.  Please confirm the bidder's understanding is correct as below. It seems that the date for the exchange rate shall	The date for the exchange rate shall be: 15 September 2021.	The bidder's understanding is correct. Please refer to the Annex B for the detail amendment.

		be 30 days prior to the deadline for Bid submission. Thus, it will be revised to <b>15<sup>th</sup> September 2021</b> , if the deadline for Bid submission is 15 <sup>th</sup> October 2021 in accordance with GBB No.26.		
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# Annex B

**PACKAGE CP NS-03: ROLLING STOCK - LIMITED EXPRESS TRAINSETS**  
**General Bid Bulletin No. 27**  
**Annex B**

ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
<b>Volume I Part 1 – Bidding Procedures</b>		
1	Volume I. Invitation for Bids (IFB) Page No. IFB-2 Item 7	<u>Reference to the General Bid Bulletin No. 26, please refer to the amended pages in Attachment 1.</u>
2	Section II. Bid Data Sheet D. Submission and Opening of Bids ITB 24.1 Page No. BDS-10	<u>Reference to the General Bid Bulletin No. 26, please refer to the amended pages in Attachment 1.</u>
3	Section II. Bid Data Sheet D. Submission and Opening of Bids ITB 27.1 Page No. BDS-10	<u>Reference to the General Bid Bulletin No. 26, please refer to the amended pages in Attachment 1.</u>
4	Section II. Bid Data Sheet E. Evaluation and Comparison of Bids ITB 37.1 Page No. BDS-11	<u>Replace the paragraphs with the following:</u>  The currency that shall be used for Bid evaluation and comparison purposes to convert all Bid Prices expressed in various currencies into a single currency is: Philippine Peso.  The source of exchange rate shall be: Bangko Sentral ng Pilipinas (BSP, the Central Bank of the Philippines).



**PACKAGE CP NS-03: ROLLING STOCK - LIMITED EXPRESS TRAINSETS**  
**General Bid Bulletin No. 27**  
**Annex B**

ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS
		The date for the exchange rate shall be: 15 September 2021. In the event of non-availability of exchange rate in the BSP website due to non-working days, the Bidder shall apply the exchange rate of the following working day.
<b>Volume II Part 2 – Employer’s Requirements</b>		
5	8.8.4.1 ERG-61	<p><u>Updated clause 8.8.4.1:</u></p> <p>The Contractor shall be responsible for performing extensive safety analyses and allocate SIL levels for any safety critical or safety related functions in the Contract in accordance with the EN50126 and demonstrate the achievement of the SIL requirement specified in this Appendices of the for review and given notice of no objection by the Engineer. <u>The Contractor may propose alternative approach such as Japanese service proven approach/products instead of SIL allocation which subject to the Engineer review and given notice of no objection.</u></p>
6	8.8.4.9 ERG-61	<p><u>Updated clause 8.8.4.9:</u></p> <p>The Contractor shall submit SIL certification <u>or alternative approach document i.e. service proven record for ISA approval and for Engineer’s review.</u></p>
7	8.10.10.1 ERG-63	<p><u>Updated clause 8.10.10.1 (1):</u></p> <p>Failures of equipment may lead to more or less important disturbance on line operations and trains running. In order to provide assurance that the final operating systems shall comply with the high reliability standard to support service quality, Reliability indicators of each system works and their components shall be provided.</p> <p style="text-align: center;"><u>Specific reliability indicators</u></p> <p style="text-align: center;">1) Service Availability and Reliability</p>

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ITEM NO.	REFERENCE/CLAUSE/ SECTION	REVISIONS / AMENDMENTS						
		<p>For essential system works not limited to signalling, Rolling Stock, telecommunications and power supply system, sufficient system redundancy shall be provided to ensure no single failure shall result in severe service disruption. Apart from the redundancy architecture, each equipment monitoring function shall be installed in TMS or dedicated system. If some device fails and the alarm is activated, the alarm/information shall be interfaced with GSMR in order to transfer the information to OCC through GSMR.</p> <p>For essential system works not limited to signalling, Rolling Stock, telecommunications and power supply system, sufficient system redundancy shall be provided to ensure no single failure shall result in severe service disruption. Apart from the redundancy architecture, each equipment monitoring function shall be installed in TMS or dedicated system. If some device fails and the alarm is activated, the alarm/information shall be interfaced with GSMR in order to transfer the information to OCC through GSMR. <del>periodic self-diagnostic functions should proactively detect problems within the system and send alarms to the operator in the OCC before more serious failure actual occurs.</del></p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr style="background-color: #cccccc;"> <th style="width: 30%;">KPI</th> <th>Calculation Formula</th> </tr> </thead> <tbody> <tr> <td>Train Service Availability</td> <td> <math display="block">\text{Service Availability (\%)} = \frac{\text{Actual Train Run in a Month}}{\text{Scheduled Train Run in a Month}} \times 100\%</math> </td> </tr> <tr> <td>Service Reliability</td> <td> <math display="block">\text{Service Reliability (train-km)} = \frac{\text{Actual Train Run in a Month Delayed by at least 15 minutes}}{\text{Actual Train Run in a Month}} \times \text{Train Running Distance in a Month}</math> </td> </tr> </tbody> </table>	KPI	Calculation Formula	Train Service Availability	$\text{Service Availability (\%)} = \frac{\text{Actual Train Run in a Month}}{\text{Scheduled Train Run in a Month}} \times 100\%$	Service Reliability	$\text{Service Reliability (train-km)} = \frac{\text{Actual Train Run in a Month Delayed by at least 15 minutes}}{\text{Actual Train Run in a Month}} \times \text{Train Running Distance in a Month}$
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**Annex B**

<b>ITEM NO.</b>	<b>REFERENCE/CLAUSE/ SECTION</b>	<b>REVISIONS / AMENDMENTS</b>
		The calculation of the service reliability does not include the failures that are not directly caused by technical failure (as vandalism, suicide, strike...). Moreover, it is also generally accepted to not take into account the failures that lead to an operational unavailability lower than 5 minutes.

# Annex B – Attachment 1

Account Name: **Procurement Service – DBM**  
Account No: **001442-1012-10**  
Swift Code: **TLBPPHMMXX**

Important Notes:

- i. Due to 72-hours standard wire transfer clearing process for online transfers, bidders are strictly advised to ensure transfer of the payment not later than 25 May 2021.
- ii. Bidders who choose to transfer payments online shall ensure that the amount transferred shall be sufficient to cover the transfer fees of correspondent banks upon conversion of the original currency to Philippines Pesos.
- iii. Bidder shall send proof of payment to the official BAC email on the same day of transfer.
- iv. Please refer to Annex A-1 for the list of Depository Bank.

The Bidding Documents (without the General Conditions of Contract) may also be downloaded by the Bidders for free of charge from the website of PS, DOTr and PNR (indicated in the item 5 above), but Bidders must pay the said non-refundable fee for the Bidding Documents before the submission of their Bids.

7. Bids must be delivered to the address above on or before 10:00 AM on ~~20-September 2021~~15 October 2021 and must be accompanied by a Bid Security of Japanese Yen Four Hundred Forty Million Nine Hundred Eighty Thousand (JPY 440,980,000).
8. The Technical Bids will be opened in the presence of Bidders' representatives who choose to attend at the address given in item 5 above, immediately after the deadline for the submission of bids.

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**Joseph Conrad D Dueñas**  
Chairperson  
Bids and Awards Committee IV

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**Joseph Conrad D Dueñas**  
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	in color with each copy of the Technical Bid.												
<b>ITB 22.2</b>	<p>The written confirmation of authorization to sign on behalf of the Bidder shall, corresponding to whether the Bidder is a Corporation, Partnership, Joint Venture (JV) or Sole Proprietorship, consist of the applicable documents, as follows:</p> <table border="1"> <thead> <tr> <th></th> <th>TYPE OF ENTITY</th> <th>DOCUMENT</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Corporation</td> <td>Board Resolution with Board Secretary Certificate</td> </tr> <tr> <td>2</td> <td>Partnership</td> <td>Articles of Partnership</td> </tr> <tr> <td>3</td> <td>Sole Proprietorship</td> <td>Special Power of Attorney (SPA)</td> </tr> </tbody> </table> <p>For a Japanese Company bidding as a Corporation, a SPA may be substituted for a Board Resolution with Board Secretary Certificate.</p> <p>However, in the case of a JV, evidence shall be provided to demonstrate that the person(s) signing the SPA is authorized to sign for and on behalf of each member of the JV.</p>		TYPE OF ENTITY	DOCUMENT	1	Corporation	Board Resolution with Board Secretary Certificate	2	Partnership	Articles of Partnership	3	Sole Proprietorship	Special Power of Attorney (SPA)
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<b>D. Submission and Opening of Bids</b>													
<b>ITB 24.1</b>	<p>For <b><u>Bid submission purposes</u></b> only, and acting on behalf of the Employer, the Procuring Agent’s address is:</p> <p>Attention: Joseph Conrad D Dueñas The Chairperson Bids and Awards Committee IV</p> <p>Address: Procurement Service RR Road, Cristobal Street, Paco, Manila</p> <p><b>The deadline for Bid submission is:</b> Date: <del>20 September 2021</del> <u>15 October 2021</u> Time: 10:00 AM</p>												
<b>ITB 27.1</b>	<p>The opening of the Technical Bids shall take place immediately after the deadline for submission of Bids in the presence of Bidders’ representatives who choose to attend at:</p> <p>Address: Procurement Service RR Road, Cristobal Street, Paco, Manila</p> <p>Date: <del>20 September 2021</del> <u>15 October 2021</u></p>												

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	Time: 10:00 AM
<b>E. Evaluation and Comparison of Bids</b>	
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<b>ITB 38.2(c)</b>	<p>Replace ITB 38.2 (c) with the following:</p> <p>“price adjustment due to discounts offered in accordance with ITB 18.7 or ITB 18.8.”</p>
<b>ITB 38.3</b>	<p>Replace ITB 38.3 with the following:</p> <p>“If price adjustment is allowed in accordance with ITB 18.5, the estimated effect of the price adjustment provisions of the Conditions of Contract, applied over the period of execution of the Contract, shall not be taken into account in Bid evaluation.”</p>

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<u>Movement of train with open door shall be prevented</u>	<u>4 (safety critical)</u>
<u>Kinetic energy of doors shall be limited</u>	<u>3 (safety critical)</u>
<u>Obstacle shall be detected on door closure</u>	<u>3 (safety critical)</u>
<u>Manual opening of at least three quarters of the doors and the platform screen doors in each passenger car shall be possible when the train is immobilized.</u>	<u>4 (safety critical)</u>
<u>50% of air conditioning power shall be guaranteed</u>	<u>2 (safety related)</u>

**SIL associated with Rolling Stock safety functional requirements**

**8.8.4 Safety Integrity Level Analysis**

8.8.4.1 The Contractor shall be responsible for performing extensive safety analyses and allocate SIL levels for any safety critical or safety related functions in the Contract in accordance with the EN50126 and demonstrate the achievement of the SIL requirement specified in this Appendices of the for review and given notice of no objection by the Engineer. The Contractor may propose alternative approach such as Japanese service proven approach/products instead of SIL allocation which subject to the Engineer review and given notice of no objection.

8.8.4.2 A Safety Integrity Level Analysis shall be carried out for all safety related system software. The Contractor shall allocate a Safety Integrity Level for each safety related system software.

8.8.4.3 In determining Safety Integrity Level, all causes of failures (including random hardware failures, systematic failures and software errors) which lead to an unsafe state should be included.

8.8.4.4 The Safety Integrity Levels defined in IEC 61508 shall be used.

8.8.4.5 The software design and development process shall comply with the relevant requirements stipulated in EN50128 and EN50129

8.8.4.6 The Contractor shall demonstrate in the safety analysis that the SIL of software system shall be able to reduce the risk ALARP. The SIL requirement for software shall apply to all applicable system, sub-systems and its interfaces delivering the identified safety functions.

8.8.4.7 The assessment methodology shall be submitted for approval by ISA before commencement of the work and for the PDP’s review and acceptance.

8.8.4.8 The Safety Integrity Level Analysis Report is part of the Safety Analysis Report.

8.8.4.9 The Contractor shall submit SIL certification or alternative approach document i.e. service proven record for-ISA approval and for Engineer’s review.

**8.9 Operation and Maintenance**

8.9.1 Safe procedures shall be written in order to ensure:

- 1) A safe utilization of the line for every passenger (in station and trains),
- 2) Safe working conditions for operator and maintenance staff within the Main line and the Depot area.

8.9.2 These rules and procedures shall be consistent with mitigation requirements from the risks analyses.

Manual opening of at least three quarters of the doors and the platform screen doors in each passenger car shall be possible when the train is immobilized.	4 (safety critical)
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**SIL associated with Rolling Stock safety functional requirements**

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8.9.2 These rules and procedures shall be consistent with mitigation requirements from the risks analyses.

**8.10 Reliability, Availability, Maintainability Targets**

8.10.1 The Contractor shall demonstrate that they are able to meet the RAM targets given herein or elsewhere for a service life as defined herein or elsewhere, or the Contractor may opt

8.10.9 Mean Down Time (MDT) represents the average elapsed time between losing Mission Capable status and restoring the system to at least partially mission capable status. Calculated as the ratio of total downtime over the number of downing events—most often, the total maintenance time over the number of maintenance events. It is used as a substitute as appropriate MTTR.

8.10.10 Overall System

8.10.10.1 Failures of equipment may lead to more or less important disturbance on line operations and trains running. In order to provide assurance that the final operating systems shall comply with the high reliability standard to support service quality, Reliability indicators of each system works and their components shall be provided.

Specific reliability indicators

1) Service Availability and Reliability

For essential system works not limited to signalling, Rolling Stock, telecommunications and power supply system, sufficient system redundancy shall be provided to ensure no single failure shall result in severe service disruption. Apart from the redundancy architecture, each equipment monitoring function shall be installed in TMS or dedicated system. If some device fails and the alarm is activated, the alarm/information shall be interfaced with GSMR in order to transfer the information to OCC through GSMR. ~~periodic self-diagnostic functions should proactively detect problems within the system and send alarms to the operator in the OCC before more serious failure actual occurs.~~

<u>KPI</u>	<u>Calculation Formula</u>
<u>Train Service Availability</u>	$\text{Service Availability (\%)} = \frac{\text{Actual Train Run in a Month}}{\text{Scheduled Train Run in a Month}} \times 100\%$
<u>Service Reliability</u>	$\text{Service Reliability (train-km)} = \frac{\text{Actual Train Run in a Month Delayed by at least 15 minutes}}{\text{Actual Train Run in a Month}} \times \text{Train Running Distance in a Month}$

The calculation of the service reliability does not include the failures that are not directly caused by technical failure (as vandalism, suicide, strike...). Moreover, it is also generally accepted to not take into account the failures that lead to an operational unavailability lower than 5 minutes.

2) Reliability

- i) The Malolos Clark Railway Project (MCRP) and the North South Railway Project-South Line (NSRP-S) system shall be designed and constructed in such a way so as to guarantee a high degree of reliability in order to provide proper operating service.
- ii) For essential system works not limited to signalling, rolling stock, telecommunications and power supply system, sufficient system redundancy shall be provided to ensure no single failure shall result in severe service disruption.
- iii) Apart from the redundancy architecture, periodic self-diagnostic functions should proactively detect problems within the system and send alarms to the operator in the OCC before more serious failure actual occurs.

3) Maintainability

the total maintenance time over the number of maintenance events. It is used as a substitute as appropriate MTTR.

8.10.10 Overall System

8.10.10.1 Failures of equipment may lead to more or less important disturbance on line operations and trains running. In order to provide assurance that the final operating systems shall comply with the high reliability standard to support service quality, Reliability indicators of each system works and their components shall be provided.

Specific reliability indicators

1) Service Availability and Reliability

For essential system works not limited to signalling, Rolling Stock, telecommunications and power supply system, sufficient system redundancy shall be provided to ensure no single failure shall result in severe service disruption. Apart from the redundancy architecture, each equipment monitoring function shall be installed in TMS or dedicated system. If some device fails and the alarm is activated, the alarm/information shall be interfaced with GSMR in order to transfer the information to OCC through GSMR.

KPI	Calculation Formula
Train Service Availability	$\text{Service Availability (\%)} = \frac{\text{Actual Train Run in a Month}}{\text{Scheduled Train Run in a Month}} \times 100\%$
Service Reliability	$\text{Service Reliability (train-km)} = \frac{\text{Actual Train Run in a Month Delayed by at least 15 minutes}}{\text{Actual Train Run in a Month}} \times \text{Train Running Distance in a Month}$

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- iii) Apart from the redundancy architecture, periodic self-diagnostic functions should proactively detect problems within the system and send alarms to the operator in the OCC before more serious failure actual occurs.

3) Maintainability

- i) The maintainability of the train reflects its ability to be restored to its operation specification level within a stated period and under specific maintenance conditions. The aim is to reduce the costs and delays and to improve the availability of the Malolos Clark Railway Project (MCRP) and the North South Railway Project-South Line (NSRP-S) system. The Contractor shall submit the