

ADDENDUM NO. 02

Engineering, Procurement and Construction (EPC) of tourist Glass Train from Islamabad to Murree Project

This **Addendum No. 02** is issued in accordance with **Clause IB 09 (Amendment of Bidding Documents)** of the Instructions to Bidders and shall form an integral part of the Bidding Documents for the "**Engineering, Procurement and Construction (EPC) of Tourist Glass Train from Islamabad to Murree Project**"

The purpose of this Addendum is to **formally notify, incorporate and amend** the relevant provisions of the Bidding Documents, as follows:

Volume – I :

Sr. No.	Volume	Description of Item and Page No.	Existing Text	Amended Text
1	<p>Volume-I</p> <p>K -1</p> <p>Schedule to Bid</p> <p>Financial Competence and Access to Financial Resources</p>	<p>1. Soundness and Access to Financial Resources</p> <p>Page # S&F – 21</p> <p>Available General Bank Credit Line Limit</p>	<p>Remarks</p> <p>...</p> <p>Any Credit Line Certificate issued by a foreign bank shall be counter guaranteed & authenticated by a scheduled bank in Pakistan and as per IB-41.</p> <p>In the case of a Foreign Bidder, any bank credit line facility issued by a bank outside Pakistan shall be confirmed/counter-guaranteed by a Scheduled Bank in Pakistan. Where the credit line is denominated in a currency other than Pak Rupees (PKR), its value for evaluation purposes shall be converted into Pak Rupees using the exchange rate published on xe.com on the date of issuance of the credit line certificate.</p>	<p>Remarks</p> <p>...</p> <p>Any Credit Line Certificate issued by a foreign bank shall be as per IB-41.</p> <p>In the case of a Foreign Bidder, any bank credit line facility issued by a bank outside Pakistan shall be submitted as per IB-41. Where the credit line is denominated in a currency other than Pak Rupees (PKR), its value for evaluation purposes shall be converted into Pak Rupees using the exchange rate published on xe.com on the date of issuance of the credit line certificate.</p>
2	<p>Volume-I</p> <p>L-1</p> <p>Schedule L to Bid</p> <p>Past Performance Commitment, Major Equipment</p>	<p>1. Past Performance of the Bidder</p> <p>Page # S&F - 24</p>	<p>...</p> <p>Construction of a straddle monorail, monorail system in mountainous / hilly terrain) completed in the last 10 years:</p> <p>1. If one (1) project carried out = 06 marks</p>	<p>...</p> <p>Construction of a straddle monorail, monorail system completed in the last 10 years:</p> <p>1. If one (1) project carried out = 06 marks</p>

Sr. No.	Volume	Description of Item and Page No.	Existing Text	Amended Text
	& Personnel Qualification and Experience		<p>2. If two (2) projects carried out = 08 marks 3. If three (3) or above project carried out = 12 marks Note: if a project carried out in Hilly / Mountainous area, then Additional = 03 marks</p> <p>Remarks</p> <p>Note: <u><i>This is the Mandatory Requirement if any Bidder(s) have not carried out such project(s) of a Straddle monorail or a monorail in mountainous/hilly terrain shall not be eligible to participate.</i></u></p>	<p>2. If two (2) projects carried out = 08 marks 3. If three (3) or above project carried out = 12 marks</p> <p>Note: if a project carried out in Hilly / Mountainous area, then Additional = 03 marks</p> <p>Remarks</p> <p>Note: <u><i>This is the Mandatory Requirement if any Bidder(s) have not carried out such project(s) of Straddle Monorail or a monorail system shall not be eligible to participate.</i></u></p>
3	Volume – I Particular Conditions Part A - Contract Data	14.3 Application for Interim Payment 14.3 (iii) Percentage of Retention Money Page# 04	Ten percent (10%)	Five percent (05%)

Volume – II:

The imported equipment's / items etc. to be procured under different Milestones shall be paid as per the percentage of their respective Milestones, detail of payment as under:

Serial No.	Stage	Payment Percentage of Milestone	Minimum Supporting Documents
1.	Approval of technical submittals by Engineering Representative and submission of original L/C established for Manufacturer	30%	Approved technical submittals; Original L/C (LC opening/retirement/amendment/extension charges etc. shall be borne by Contractor).
2.	Pre-shipment clearance and shipping documentation submission	30%	Pre-shipment Inspection of the imported equipment(s) / Item(s) etc.; Certified commercial invoice; Clear B/L or AWB; Marine insurance (Ex-Works to Site); Packing list; Certificate of Origin (original); Inspection certificate; any statutory-required document
3.	Delivery at Site	10%	Imported equipment(s) / Item(s) etc. reached at site upto the satisfaction of Engineer Representative.
4.	Installation, Testing & Commissioning completion	15%	Successful Installation, Testing and Commissioning of Equipment(s) / Items etc. upto the satisfaction of the Engineer Representative.
5.	Final Acceptance Certificate (DNP Closure) Issued	15%	Final Acceptance / Performance Certificate after Defects Notification Period (DNP)

Volume – III:

Sr. No.	Volume	Description of Item and Page No.	Existing Text	Amended Text												
	<p>Volume-III</p> <p>Chapter - 2</p> <p>Alignment</p>	<p>2.5 Guideway Markings</p> <p>2.5.3 Monorail Alignment Features:</p> <p>Page # 31</p>	<p>...</p> <table border="1" data-bbox="913 397 1344 673"> <tr> <td>Maximum Design Speed</td> <td>80 kmph</td> </tr> <tr> <td>Maximum Operating Speed</td> <td>60 kmph</td> </tr> <tr> <td>Minimum commercial Operating Speed</td> <td>25 kmph</td> </tr> </table> <p>...</p>	Maximum Design Speed	80 kmph	Maximum Operating Speed	60 kmph	Minimum commercial Operating Speed	25 kmph	<p>...</p> <table border="1" data-bbox="1386 397 1816 673"> <tr> <td>Maximum Design Speed</td> <td>90 kmph</td> </tr> <tr> <td>Maximum Operating Speed</td> <td>80 kmph</td> </tr> <tr> <td>Minimum commercial Operating Speed</td> <td>30 kmph</td> </tr> </table> <p>...</p>	Maximum Design Speed	90 kmph	Maximum Operating Speed	80 kmph	Minimum commercial Operating Speed	30 kmph
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	<p>Volume – III</p> <p>Chapter - 8</p> <p>Communication System</p>	<p>8.12 Email System</p> <p>Page # 193</p>	<p>The Murree Glass Train monorail will be equipped with an e-mail network, so that people can work on personal computers and can exchange data through e-mails....</p>	<p>The Murree Glass Train monorail will be equipped with an WIFI network, so that people can work on personal computers and can exchange data through e-mails.....</p>												
	<p>Volume – III</p> <p>Chapter – 1</p> <p>General Technical Requirements</p>	<p>1.3. Monorail system</p> <p>Page # 12 and 13</p>	<p>The codes, standards and specifications applicable for design of the components of the Monorail System and for its operation and maintenance are:</p> <p>(i) NFPA-130 - 'Standard for Fixed Guideway - Transit and Passenger Rail System';</p> <p>(ii) European Norm (EN);</p> <p>(iii) International Electro Technical Commission Standards (IEC);</p> <p>(iv) International Standards Organization (ISO);</p> <p>(v) Japanese Industrial Standards (JIS);</p>	<p>The codes, standards and specifications applicable for design of the components of the Monorail System and for its operation and maintenance are:</p> <p>(i) NFPA-130 - 'Standard for Fixed Guideway - Transit and Passenger Rail System';</p> <p>(ii) European Norm (EN);</p> <p>(iii) International Electro Technical Commission Standards (IEC);</p> <p>(iv) International Standards Organization (ISO);</p> <p>(v) Japanese Industrial Standards (JIS);</p> <p>(vi) United States of America, AIS, AAR;</p> <p>(vii) British Standards (BS);</p>												

Sr. No.	Volume	Description of Item and Page No.	Existing Text	Amended Text
			(vi) United States of America, AIS, AAR; (vii) British Standards (BS); (viii) German Standards (DIN); and (viii) Any other standards referred to in this Manual.	(viii) German Standards (DIN); (viii) EN45545; (ix) GB 55033-2022; (x) GB/T 50458-2022; and (xi) Any other standards referred to in this Manual.
	Volume – III Chapter – 5 Rolling Stock	5.18 Auxiliary Power Supply Page # 104 (a) All Trains shall be equipped with a stand-by battery power source consisting of Nickel cadmium cells having a nominal voltage of 110V. The battery shall be rated and tested as per IEC 60623 and IEC 60993. It should supply Emergency load for at least 90 minutes in case of failure of power supply from battery charger and the voltage level at any device shall not fall below 77V DC..... (a) All Trains shall be equipped with a stand-by battery power source consisting of Nickel cadmium cells having a nominal voltage of 110V. The battery shall be rated and tested as per IEC 60623 and IEC 60993. It should supply Emergency load for at least 60 minutes in case of failure of power supply from battery charger and the voltage level at any device shall not fall below 77V DC.....
	Volume – III Chapter – 5 Rolling Stock	5.23.5 Moving Train Page # 107	(a) The noise level when running at the scheduled maximum speed shall not exceed 72 dB (A). The noise level shall be measured in the car along the center line between 1200 mm and 1600 mm above the floor and at a distance over 600 mm from the end of the car. The measurement shall be done as per ISO 3381.	(a) The noise level when running at the scheduled maximum speed shall not exceed 72 dB (A). The noise level shall be measured in the car along the center line between 1200 mm and 1600 mm above the floor and at a distance over 600 mm from the end of the car. The measurement shall be done as per ISO 3381. <ul style="list-style-type: none"> • Speed: 60 km/h • Distance: 10 m from beam center

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			(b) Noise level outside the Train when the train is moving at the scheduled maximum speed shall not exceed 85 dB (A) with all auxiliary systems operating. The noise level shall be measured at a point 7.5 m from the Train center line at a point between 1200 mm and 1500 mm above the rail level. The measurement shall be done as per ISO 3095.	<ul style="list-style-type: none"> • Height: 1.2 m • Limit: ≤ 77 dB(A) (b) Noise level outside the Train when the train is moving at the scheduled maximum speed shall not exceed 85 dB (A) with all auxiliary systems operating. The noise level shall be measured at a point 7.5 m from the Train center line at a point between 1200 mm and 1500 mm above the rail level. The measurement shall be done as per ISO 3095. <ul style="list-style-type: none"> • Speed: 60 km/h • Locations: driver's cab & passenger saloon center • Height: 1.6 m • Limit: ≤ 73 dB(A)
	Volume – III Chapter – 5 Rolling Stock	5.4 Ride and Stability Page # 94	5.4.2. The Sperling Ride Index (RI) of the Car under all loading conditions, when travelling throughout the range of operating speeds and curves prevailing in normal passenger service for the service life of all suspension components shall not exceed 2.75 in both vertical and horizontal directions in inflated condition and 3.0 in deflated condition. The ride quality of the Car shall conform to EN 2631-Part 4.	5.4.2. The Sperling Ride Index (RI) of the Car under all loading conditions, when travelling throughout the range of operating speeds and curves prevailing in normal passenger service for the service life of all suspension components shall not exceed 2.75 in both vertical and horizontal directions in inflated condition and 3.0 in deflated condition. The ride quality of the Car shall conform to EN 2631-Part 4 / GB-5599-2019 or equivalent standards, as applicable.
	Volume-III	2.5 Guideway Markings

Sr. No.	Volume	Description of Item and Page No.	Existing Text		Amended Text	
	Chapter - 2 Alignment	2.5.3 Monorail Alignment Features: Page # 31	Performance, Acceleration Rate (service)	1.0 m/s ² minimum	Performance, Acceleration Rate (5-45 km/h)	≤1.0 m / s ²
			... Design of Headway	ATP-5 Minutes ATO 90 Seconds	... Design of Headway	ATP-2 Minutes ATO 130 Seconds
	Volume – III Chapter – 5 Rolling Stock	5.24 Testing and Certification of Rolling Stock Page # 108 The following 5.24.4 is added after 5.24.3:		5.24.4 . Rolling stock testing, commissioning, and acceptance shall be carried out in accordance with IEC 61133:2016. In addition, compliance with EN 50126/50128/50129 (RAMS and functional safety), EN 45545 (fire safety), and relevant IEC traction and electrical standards shall be demonstrated if required. Testing and certification shall be verified by a third party, acceptable to the Employer."	
	Volume – III Chapter - 8 Communication System	8.4 Clock 8.4.1 Functional Specifications Page # 158	ii The primary digital master clock installed in the OCC shall be synchronized with the Global Positioning System (GPS) time system.....		ii The primary digital master clock installed in the OCC shall be synchronized with the Global Positioning System (GPS) or BeiDou Navigation Satellite System (BDS) time system.....	
	Volume – III Chapter - 8 Communication System	8.8.3.3 Power Supply Page # 185	8.8.3.3.1. The DC power supply system will typically consist of rectifiers, battery with 4- hour autonomy and DC distribution.....		8.8.3.3.1. The DC power supply system will typically consist of rectifiers, battery with 02- hour autonomy and DC distribution.....	