

MAHARASHTRA METRO RAIL CORPORATION LIMITED
NAGPUR METRO RAIL PROJECT

Date: 16th April'2024

Corrigendum-II

Name of the Work: **Design and Construction of Elevated Metro Viaduct for NMRP Phase-2 in**
I. Between Ch (-) 7577.056 m to Ch (-) 13457.046 m of length 5.9 km in Reach 2B
II. Between Ch 18218.586 m to Ch 24633.194 m of length 6.414 km in Reach 3A
III. Between Ch (-) 289.668 m to Ch (-) 5622.577 m of length 5.333 km in Reach 4A

TENDER No: N2-035/C-11/2024

S.No.	Section, Clause & Page no.	Existing Clause	Revised Clause
1	NIT Document on Sale	Documents can be downloaded from 16.00 hrs. On 11/03/2024 to 16.00 Hrs. on 02/05/2024 from Maharashtra government E-Tender Portal i.e. https://mahatenders.gov.in	Documents can be downloaded from 16.00 hrs. On 11/03/2024 to 16.00 Hrs. on 09/05/2024 from Maharashtra government E-Tender Portal i.e. https://mahatenders.gov.in
2	NIT Date & Time of submission of Tender	Online submission shall start from 11.00 Hrs on 16/04/2024 and up till 16.00 Hrs. on Dt. 02/05/2024 on https://mahatenders.gov.in	Online submission shall start from 11.00 Hrs on 16/04/2024 and up till 16.00 Hrs. on Dt. 09/05/2024 on https://mahatenders.gov.in
3	NIT Date & Time of Opening of Tender	On Dt. 03/05/2024 after 16.30 Hours in Procurement Department, 1st Floor, "Metro Bhawan" East High Court Road (VIP Road), Near Dikshabhoomi, Ramdaspath, Nagpur – 440010.	On Dt. 10/05/2024 after 16.30 Hours in Procurement Department, 1st Floor, "Metro Bhawan" East High Court Road (VIP Road), Near Dikshabhoomi, Ramdaspath, Nagpur – 440010.
4	5.2 Design Loads d) LWR Force; of Part-2- Work Requirement Section-VII-E, Employer's Requirements, General Planning Criteria (272 of 1439)	d) LWR Force: Maximum longitudinal LWR force due to Rail Structure Interaction (RSI) after taking load combination due to rail breaking and due to temperature difference with 10% dynamic augmentation shall be taken as 13.2 kN/m (for single as well as double track) for span <= 31 m and for superstructure supported on elastomeric bearing in the absence of an RSI analysis. In case RSI is done, the value obtained through RSI analysis may be adopted subjected to minimum of 5 kN/m. However, for special/longer spans or for bearings other than elastomeric bearings or spans with tie rod/seismic restrainer fixed with substructure; RSI analysis to be done and value of LWR forces thus obtained must be used for design purpose. The RSI analysis due to continuous welded rail with direct fixation fasteners shall be performed in accordance with proven international practice or and as mentioned	d) LWR Force: Minimum longitudinal LWR force due to Rail Structure Interaction (RSI) after taking load combination due to rail breaking and due to temperature difference with 10% dynamic augmentation shall be taken as 13.2 kN/m (for single as well as double track) for span <= 31 m and for superstructure supported on elastomeric bearings For special/longer spans or for bearings other than elastomeric bearings or spans with tie rod/seismic restrainer fixed with substructure; RSI analysis to be done. The RSI analysis due to continuous welded rail with direct fixation fasteners shall be performed in accordance with proven international practice or and as mentioned in DBR for viaduct approved by Ministry of Railways, attached with the tender document. But if the value of longitudinal LWR force by such

S.No.	Section, Clause & Page no.	Existing Clause	Revised Clause
		<p>in DBR for viaduct approved by Ministry of Railways, attached with the tender document.</p> <p>Load combinations and other parameters/clauses shall be considered as per the relevant standard codes of practice.</p> <p>Value of horizontal transverse LWR force in curves to be applied in a horizontal plane at the top of lower rail as follows: Transverse Force: The transverse force (T) per linear meter of structure per rail shall be determined by the following formula:</p> $T = \frac{650 \text{ kN}}{R}$ <p>Where R = radius of rail curvature in meters</p>	<p>RSI analysis comes out to be less than 13.2 kN/m; then the detailed design has to be carried out with the minimum value of 13.2 kN/m.</p> <p>Load combinations and other parameters/clauses shall be considered as per the relevant standard codes of practice.</p> <p>Value of horizontal transverse LWR force in curves to be applied in a horizontal plane at the top of lower rail as follows: Transverse Force: The transverse force (T) per linear meter of structure per rail shall be determined by the following formula:</p> $T = \frac{650 \text{ kN}}{R}$ <p>Where R = radius of rail curvature in meters</p> <p>Notes: Guidelines vide BS Report No. 119 "RDSO Guidelines for carrying out Rail-Structure Interaction studies on Metro System (Version-2)" and UIC 774-3R shall be referred.</p>
5	5.2 Design Loads b) OHE and Signalling loads: Part-2- Work Requirement Section-VII-E, Employer's Requirements, General Planning Criteria (272 of 1439)	<p>b) OHE and Signalling loads:</p> <p>Loads due to OHE masts/portals and Signalling Posts shall be considered at all locations as per the Layout Plans (LOP) of OHE and Signalling provided. The details of loading are attached as Appendix-21 & 23.</p>	<p>b) <u>OHE and Signalling loads:</u></p> <p>1. For longitudinal detailed design of the viaduct, loads due to OHE masts/portals (as provided in Annexure-VII-9) for carrying out the detailed design shall be taken for the worst condition i.e. One at the middle of the span for producing maximum bending moment and One at the 1/4th and one at the 3/4th of the span for producing maximum shear force (the same may be considered for obtaining support reactions). However, actual provision of pedestals for the OHE masts/portals shall be done as per the OHE LOP. As regards transverse design of the superstructure entailing provisions of additional reinforcement, the same shall be provided conforming to the location of masts/portals as per approved LOP.</p> <p>2. Loads due to Signaling Posts (as provided in Annexure-VII-9) shall be considered at locations as per the Signaling LoP provided.</p>