# Maharashtra Metro Rail Corporation Limited

(A joint venture of Govt. of India & Govt. of Maharashtra)

## Nagpur Metro Rail Project - Phase 2

16 October 2023

### Corrigendum-I

#### Tender No: N2-010/C-04/2023 dated 07-Sep-2023

Name of Work: Design and Construction of Elevated Metro Viaduct of length 5.333 km between Ch. (-)289.668 m to Ch. (-)5622.577 m in Reach 4A of NMRP Phase-2

Sr. No.	Reference	Existing Provision	Revised Provision
1	Part-3 Conditions of Contract Part A – Contract Data Clause 14.6.2	minimum amount of Interim Payment Certificate (IPC): Gross Bill Amount: 0.5% of the Accepted Contract Price	minimum amount of Interim Payment Certificate (IPC): Gross Bill Amount: 1.0% of the Accepted Contract Price
2	Part-1 Page: 77 of 1121 Clause No. 5. Equipment, Sr. No. 2	60 cum/hr.) minimum or equivalent capacity in different	Atleast One Fully automatic and computerized batching plant of 60 cum/hr capacity with suitable arrangements including RO for proper quality of water is mandatory requirement for the entire duration of the project. However, Bidder shall establish Second batching plant if required, as per the programme approved by the Engineer. Further, bidder has to submit undertaking for uninterrupted supply of concrete.
3	Part-II, Works Requirement, Section VII-A, Employers Requirement - General, Cl. 7 (1)	The Key Dates are defined in Annexure IX-G to these Employer's Requirements.	Provision shall be read as: The Key Dates are defined in Part-II, Works Requirements, Section VII : ANNEXURE - VII- 3 (APPENDICES), Appendix 2B.
4	Part-II, Works Requirement, Section VII-A, Employers Requirement - General, CI. 10 (1) (C)		Provision shall be read as: To obtain from the Interfacing Contractors information reasonably required to enable the Contractor to meet the design submission dates as identified in Part-II, Works Requirements, Section VII : ANNEXURE - VII- 3 (APPENDICES), Appendix 2B

# Following Modifications in the Bid Provisions shall apply:

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# Corrigendum-l

# Tender No: N2-010/C-04/2023 dated 07-Sep-2023

Name of Work: Design and Construction of Elevated Metro Viaduct of length 5.333 km between Ch. (-)289.668 m to Ch. (-)5622.577 m in Reach 4A of NMRP Phase-2

# Following Modifications in the Bid Provisions shall apply:

Sr. No.	Reference	Existing Provision	Revised Provision
5		Contractor shall commence design interface with the Interfacing Contractors as soon as he has been notified by the Engineer that such Interfacing Contract has been awarded. In the case of utility agencies and other statutory boards, interface shall commence as soon as it is practicable. Where no design interface date has been established because the Interfacing Contractors have not been identified or for whatever reason, the Contractor shall liaise with such Interfacing Contractor(s) as soon as they have been awarded	The dates shown in <b>Part-II</b> , <b>Works Requirements</b> , <b>Section VII : ANNEXURE - VII- 3 (APPENDICES)</b> , <b>Appendix 2B</b> are critical to the timely completion of the project. The Contractor shall commence design interface with the Interfacing Contractors as soon as he has been notified by the Engineer that such Interfacing Contract has been awarded. In the case of utility agencies and other statutory boards, interface shall commence as soon as it is practicable. Where no design interface date has been established because the Interfacing Contractors have not been identified or for whatever reason, the Contractor shall liaise with such Interfacing Contractor(s) as soon as they have been awarded
6	Part-II, Works Requirement, Section VII-C, Employers Requirement - Design, CI. 7 (6)	As-Built Drawings, endorsed by the Contractor shall be submitted to the Engineer for agreement in accordance with Annexure-IX-H of Part-3 Conditions of Contract	Provision shall be read as: As-Built Drawings, endorsed by the Contractor shall be submitted to the Engineer for agreement in accordance with <b>Point no. 8, Section VII Annexure-VII-8 : Design</b> <b>Requirements of Part-2, of this document.</b>
7	Point no. 2, Appendix - 3, Part II- Work Requirement, Section-VII Annexure-VII-3 - Appendices	Requirements for the computation of Key Dates are given in annexure IX-G of part III, Conditions of Contract, of this document	Provision shall be read as: Requirements for the computation of Key Dates are given in Part-II, Works Requirements, Section VII : ANNEXURE - VII- 3 (APPENDICES), Appendix 2B, of this document



#### Corrigendum-I

# Tender No: N2-010/C-04/2023 dated 07-Sep-2023

Name of Work: Design and Construction of Elevated Metro Viaduct of length 5.333 km between Ch. (-)289.668 m to Ch. (-)5622.577 m in Reach 4A of NMRP Phase-2

#### Sr. No. Reference **Existing Provision Revised Provision** Point no. 1(2), Appendix - 4, Part II-The Tenderer/ Contractor shall always programme his Provision shall be read as: Work Requirement, Section-VII work to meet the Key Dates stated in Annexure IX-G of The Tenderer/ Contractor shall always programme his Annexure-VII-3 - Appendices part III of this document and the specified interface periods work to meet the Key Dates stated in Part-II, Works for the design and installation of the Works with those of Requirements, Section VII : ANNEXURE - VII- 3 the Designated Contractors and shall during the progress (APPENDICES), Appendix 2B, of this document and the of the Works constantly monitor his progress the specified interface periods for the design and installation of 8 programmes described below the Works with those of the Designated Contractors and shall during the progress of the Works constantly monitor his progress the programmes described below No technical specification for powder coating of M.S. Details/Specifications for powder coating of M.S. hand rail Part-II, Works Requirement. Section VII-F, Technical handrail. is enclosed with this corrigendum as Annexure - B. Same Specifications 9 shall be used by the bidder. Part-II, Works Requirement, TYPICAL MS HANDRAIL DETAIL FOR VIADUCT Updated drawing for Typical Railing detail for viaduct is Section VII-E, Annexure-VII-9 CV-PRM-TDR-PHASE-02-DRP-0006 enclsoed with this corrigendum as Annexure - C. Same Reference Drawings (Typical-CV-PRM-TDR-PHASE-02-DRP-0006A shall be used by the bidder. 10 Viaduct) CV-PRM-TDR-PHASE-02-DRP-0006B CV-PRM-TDR-PHASE-02-DRP-0006C Part-II, Works Requirement, No technical specification for FRP manhole cover. Details of FRP manhole cover is enclsoed with this Section VII-F, Technical corrigendum as Annexure - D. Same shall be used by the Specifications bidder. 11

# Following Modifications in the Bid Provisions shall apply:



#### Corrigendum-I

## Tender No: N2-010/C-04/2023 dated 07-Sep-2023

Name of Work: Design and Construction of Elevated Metro Viaduct of length 5.333 km between Ch. (-)289.668 m to Ch. (-)5622.577 m in Reach 4A of NMRP Phase-2

#### Following Modifications in the Bid Provisions shall apply:

Sr. No.	Reference	Existing Provision	Revised Provision
12		circle to Transport Nagar station including viaduct in station portion. The start and end chainages of the alignment are (-) 289.668 m and (-) 5622.577m respectively. The total length of viaduct is 5332.917m metres. GAD enclosed with the bid/tender documents may be referred. Salient details of GAD are given below: a. The elevated Section of (Reach-4A) starts from Chainage (-) 289.668 m (represented by portal pier MPP1) and ends at (-) 5622.577 m. However, Pier and Pier Cap at beginning of the section will not be a part of scope of works defined in this contract.	Design and Construction of Viaduct between HB Town circle to Transport Nagar station including viaduct in station portion. The start and end chainages of the alignment are (-) 289.668 m and (-) 5560.827 m respectively. The total length of viaduct is 5271.159 metres. GAD enclosed with the bid/tender documents may be referred. Salient details of GAD are given below: a. The elevated Section of (Reach-4A) starts from Chainage (-) 289.668 m (represented by portal pier MPP1) and ends at (-) 5560.827 m. However, Pier and Pier Cap at beginning of the section will not be a part of scope of works defined in this contract.
13	Part IV, Fiancial Bid & BOQ, sl no. 1 (ii) -b, Preamble	Elevated viaduct of length 5.333km from CH: (-) 289.668m to CH: (-) 5622.577m which includes: b) 3.374 Km of Elevated viaduct section from end of	<ul> <li>i. Schedule 'B': Covers Design &amp; Construction of Elevated viaduct of length 5.271km from CH: (-) 289.668m to CH: (-) 5560.827m which includes:</li> <li>b) 3.312 Km of Elevated viaduct section from end of NHAI Ramp CH: (-) 2248.480m to CH: (-) 5560.827m end of Reach-4A.</li> </ul>

Encls. 1. Annexure-A (Replies to Prebid Queries)

- 2. Annexure-B (Specification of Powder Coating on Railing in Viaduct)
- 3. Annexure-C (Updated drawing for Typical Railing detail for viaduct)
- 4. Annexure-D (Specification for FRP manhole cover)



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(Annexure-A)

Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
1	Part-1 Bidding Procedure	NIT Date & Time of Submission of Tender	online uptill 16:00 hrs. on 01.11.2023	The tender conditions are amalgamation of various critical conditons & specifications primarily incl. design & build type stations & viaduct, which would require more time to submit optimum bid after reviewing all aspects. Hence the employer is requested to kindly ammend the same as below duly recongnising the same: Time & date of submission of Tender online uptill <b>16:00 hrs. on 01-12-2023</b>	issued if Bid-Schedule is changed. There is no change in Bid-Schedule so far.
2	Part-1 Bidding Procedure				
3	Part-2 Work Requirement V1	Clause 2.1.2	piers integrated with NHAI flyover) In the double decker portion, Foundation (Pile, Pile Cap), Pier and Pier Cap (to support NHAI Superstructure), Superstructure for NHAI flyover are in the scope of NHAI and has been completed by NHAI. Design and Construction of Pier (from the top of NHAI pier cap)	<ol> <li>For submission of optimum bid more details regarding the NHAI structure is required. Hence, employer is requested to provide the same.</li> <li>The contractor believes that the flyover works beyond thealready constructed pier cap by NHAi shall begin after the completion of metro works in that portion. Kindly confirm the same.</li> </ol>	construction of metro viaduct (like reactions from launching girders) and operations of metro rail are considered in the design of already constructed substructure. 2) Bidder is requested to refer to the reference drawings at Annexure VII- 9, Part 2

Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
4	Part-2 Work Requirement V1	ERGS clause 2.6	<b>DUMPING YARD</b> No land for casting yard or offices/laboratories etc. will be provided by the employer.	The employer is requested to ammend relevant contractual provions for arrangement of land for casting yard or offices/laboratories etc. near to site (of 6 hectares approx. area at one or more location) under its scope, in line with general MRTS industry practice which would be very difficult as well as time consuming task if arranged by any private organisation instead of Govt. organisation ( i.e. employer). Kindly consider our request while duly considering such stringent time schedule.	Not accepted. Tender conditions prevails
5	Part-3 Conditions of Contract	PCC clause 2.1	After award of the work, The Engineer shall grant the Contractor right of access to, and /or possession of, the Site progressively for the completion of	<ol> <li>The employer is requested to clarify the viaduct stretch which will be handed over in progressive manner as specified in contract agreement.</li> <li>The employer is requested to specify the status of land availability, R&amp;R issues and status of already obtained permissions if any, by it.</li> </ol>	along the median of the road and the land will be available
6	Part 4 - Financial Bid	Preamble Sr. No. 29	claim shall be entertained on this account.	for EOT and/or increase in cost due to such delay shall be accounted and ammend the subject condition, accordingly.	If the delay is justified, suitable Extension of Time (EoT) shall be granted as per relevant tender conditions. However no monetary claim against the EoT is admissible
7	Part-3 Conditions of Contract	PCC Clause 14.3	<b>Certificates:</b> The Minimum IPC amount shall not be less than 1% of Contract price	2. Also monthly bill amount for initial and final months	
	Part-3 Conditions of Contract	Particular Conditions Part A – Contract Data Clause 14.6.2	Certificate (IPC): Gross Bill Amount: 0.5% of the Accepted Contract Price	of project is liable to not achieve the stated requirement of minimum 1% or 0.5% of contract price. The employer is hereby requested to waive off this clause, so that contractor's financial cycle remain unhindered.	

Design and Construction of Elevated Metro Viaduct of Length 5.333 km between Ch: (-) 289.668 m to Ch: (-) 5622.577 m in Reach-4A of	NMRP Phase-2
Tender Notification No: N2-010/C-04/2023	

Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
8	Part-3 Conditions of Contract	PCC Clause 8.5.1 (2) (c.)	However, the Contractor shall not be	Kindly consider our request.	
9	Part-3 Conditions of Contract	PCC Clause 4.13		accordingly	to understand actual site condition.
10	Part 2 Works Requirement V5 & V6	-	Tender Reference Drawings & Project Alignment	The employer is requested to provide AutoCAD copy of Tender reference drawings and KMZ file of project alignment	PDF files of the tender drawings are clear and are adeqaute to have an understanding for tender purpose.
11	Part-3 Conditions of Contract	PCC clause 4.2			Not accepted. Tender conditions prevails

Design and Construction of Elevated Metro Viaduct of Length 5.333 km between Ch: (-) 289.668 m to Ch: (-) 5622.577 m in Reach-4A of	f NMRP Phase-2
Tender Notification No: N2-010/C-04/2023	

Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
12	Part-3 Conditions of Contract		shipped & Delivered at site: NIL	<ul> <li>The employer is hereby requested to provide P&amp;M advance &amp; Material advance as below as the same is being followed in similar MRTS projects.</li> <li><b>1. Plant and Machinery Advance:</b> 5% of Original Contract Value.</li> <li><b>2. Material Advance:</b> A provisional payment on account of main construction materials required for the Permanent Works, shall be paid on request of the Contractor after these materials are brought to Site, against an Indemnity Bond in a form acceptable to Employer is duly executed.</li> </ul>	Not accepted. Tender conditions prevails
13	Part-3 Conditions of Contract	PCC Clause 14.2		Kindly consider our request.	Not accepted. Tender conditions prevails
14	Part-3 Conditions of Contract		(General Works), Sch-B (Design and Built works of viaduct <b>whereas not</b>	The Schedule-C of BOQ consists of incidental, unforeseen or miscellaneous items which are not covered under Lumpsum Component. These items are highly volatile & uncertain and cannot be predicted by any experienced contracting agency. Hence, to cover such contingency it is hereby requested to apply price variation in schedule C as well.	Not accepted. Tender conditions

(Annexure-A)
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Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
15	Part-3 Conditions of Contract		Quantities / Pricing Document shall be deemed to include amounts to cover the contingency of such rise or fall in costs. (it is clarified that Price Adjustment	Kindly consider our request.	
16	Part 4 - Financial Bid				Yes, your understanding is correct
17	Part 2 Works Requirement V1	ERGS Appendix- 2B	programme & establishing site office shall be achieved in 4 weeks from the date of commencement.		Not accepted. Tender conditions prevails

Corrigendum-I (Annexure-A) (Annexure-A)

Design and Construction of Elevated Metro Viaduct of Length 5.333 km between Ch: (-) 289.668 m to Ch: (-) 5622.577 m in Reach-4A of NMRP Phase-2					
Tender Notification No: N2-010/C-04/2023					

Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
18	Part 2 Works Requirement V1	ERGS Appendix- 2C	meters of commercial area at Prajapati Nagar Metro Station (at Chainage (-)113 m) available for use as the Site Office. The Contractor shall suitably develop the allotted open space at PD-2 Level (Station Box) to make it usable as the site office as specified under this appendix including but not limited to Civil,	Kindly consider and clarify our request.	
19	Part 2 Works Requirement V1	2C	cannot provide the designated space to the contractor, the contractor shall have the option to find an alternative suitable space for the Site office, subject to specific approval from Maha Metro. In	Kindly consider our request.	

Design and Construction of Elevated Metro Viaduct of Length 5.333 km between Ch: (-) 289.668 m to Ch: (-) 5622.577 m in Reach-4	A of NMRP Phase-2
Tender Notification No: N2-010/C-04/2023	

Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
	Part 1 Bidding Procedure	rt 1 Bidding	work of value equivalent to atleast INR 208 Crores under a Single Contract	DHODE KUD/FIVOVELID A SINDLE CONTACT	Not accepted. Tender conditions prevails
20			work of value equivalent to at least INR		
			work of value equivalent to at least INR	bridge ROB/Hyover in Three Contracts .	
			experience : Other Member of the JV must have received at least INR 52 Cr.	Kindly amend this clause as Other Members of the JV must have received at least INR 52 Cr towards construction of any viaduct works up to two contracts collectively and also require experience with metro projects ongoing or completed work.	Not accepted. Tender conditions
21	Part-2	18/Clause No.	paid or deducted as the case may be.	Kindly note with increase in height, foundation cost will also be increased. Extra cost of pier & foundation shall be considered for variation instead of pier.	

				(Annexure-A			
Design and Construction of Elevated Metro Viaduct of Length 5.333 km between Ch: (-) 289.668 m to Ch: (-) 5622.577 m in Reach-4A of NMRP Phase-2 Tender Notification No: N2-010/C-04/2023							
Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response			
Part-2	18/Clause No. 2.1.1 Point 8	paid or deducted as the case may be. Only the increase/decrease in height of	rates for pier length variation.	Tender Conditions prevails			
Part-2	18/Clause No. 2.1.1 Point 8	paid or deducted as the case may be. Only the increase/decrease in height of	considerable and detailed geotechnical investigation data is not available, we request you to kindly consider				
Part-2	22/Clause No. 2.1.1 Notes, Point No 1	technically not required. In case of open foundation resting on hard rock strata, necessary shear/rock anchors shall be	avoided if not required from design.	Yes, to be provided as per design re			
Part-2	33/Clause No. 5	"The design life of all permanent works shall be 120 years."	Please note, design life is 100 years as per referred clause of IRS CBC in viaduct DBR. Pls clarify.	Design life as mentioned in DBR shall be followed.			
Part-2	77/Clause No. 5.2 f)	"Effective Length of pier columns for simply"	Please note, effective length of portals will be different in both the directions as specified. Pls mention the effective length criteria for portal piers.	Effective Length Criteria for Portal Piers is already mentioned at 5.2 (f) of Part-II, Section-VII-E General Planning Criteria.			
	Reference         Volume         Part-2         Part-2         Part-2         Part-2         Part-2         Part-2	Reference VolumeReference SectionPart-218/Clause No. 2.1.1 Point 8Part-218/Clause No. 2.1.1 Point 8Part-218/Clause No. 2.1.1 Point 8Part-222/Clause No. 2.1.1 Notes, Point No 1Part-233/Clause No. 5Part-277/Clause No. 5.2	Reference Volume         Reference Section         Reference to tender document clause           Part-2         18/Clause No. 2.1.1 Point 8         "Variation beyond this range shall be paid or deducted as the case may be. Only the increase/decrease in height of pier(s) (i.e. concrete and steel quantity) will be considered"           Part-2         18/Clause No. 2.1.1 Point 8         "Variation beyond this range shall be paid or deducted as the case may be. Only the increase/decrease in height of pier(s) (i.e. concrete and steel quantity) will be considered"           Part-2         18/Clause No. 2.1.1 Point 8         "Variation beyond this range shall be paid or deducted as the case may be. Only the increase/decrease in height of pier(s) (i.e. concrete and steel quantity) will be considered"           Part-2         22/Clause No. 2.1.1 Notes, Point No 1         "pile foundation is not feasible or technically not required. In case of open foundation resting on hard rock strata, necessary shear/rock anchors shall be provided at no extra cost to the Employer."           Part-2         33/Clause No. 5         "The design life of all permanent works shall be 120 years."           Part-2         77/Clause No. 5.2         "Effective Length of pier columns for simply"	Reference Volume         Reference Section         Reference to tender document clause         Queries           Part-2         18/Clause No. 2.1.1 Point 8         "Variation beyond this range shall be paid or deducted as the case may be, rates for pier length variation.         BOQ where in bidders can quote paid or deducted as the case may be, rates for pier length variation.           Part-2         18/Clause No. 2.1.1 Point 8         "Variation beyond this range shall be paid or deducted as the case may be, only the increase/decrease in height of pier(s) (i.e. concrete and steel quantity) will be considered"         Since the variation in geographical strata in paid or deducted as the case may be, considerable and detailed geotechnical investigation Only the increase/decrease in height of data is not available, we request you to kindly consider pier(s) (i.e. concrete and steel quantity) will be considered"           Part-2         22/Clause No. 2.1.1 Point 8         "Pile foundation is not feasible or lechnically not required. In case of open foundation resting on hard rock strata, necessary shear/rock anchors shall be provided at no extra cost to the Employer."         Please note, design life is 100 years as per referred clause of IRS CBC in viaduct DBR. Pls clarify.           Part-2         77/Clause No. 5.2         "Effective Length of pier columns for shall be 120 years."         Please note, effective length of portals will be different in both the directions as specified. Pls mention the effective length critical for portal piers.			

20		f)			of Part-II, Section-VII-E General Planning Criteria.
27	Part-2		columns due to live loads shall be restricted to a maximum of 5 mm."	Please note, there are no such requirement of restriction of longitudinal sway in any of the code. Pls clarify whether the requirement is only under vertical live loads with dynamic impact only and not due to associated longitudinal force.	carrying Out Rail Structure Interaction studies on Metro Systems" Tender clause is already clear and the same may be referred.
28	Tender Drawings	General condition	Auotcad drawings		PDF files of the tender drawings are clear and are adeqaute to have an understanding for tender purpose.

'An	nex	ure	-A)

Design and Construction of Elevated Metro Viaduct of Length 5.333 km between Ch: (-) 289.668 m to Ch: (-) 5622.577 m in Reach-4A of NMRP Phase- Tender Notification No: N2-010/C-04/2023	2
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Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
29	Part - 1	79/Clause No. 6 Notes	stationed at Nagpur	<ol> <li>Entire Design team is proposed to be placed at Nagpur. We propose to have one design expert stationed at Nagpur and design production to be done from HQ of design consultant.</li> <li>Requirement of design manpower for Lumpsum viaduct design is on higher side compare to already executed similar projects .</li> </ol>	Tender Conditions prevail.
30	Part - 1	77/Clause No. 5	batching plant (2 nos. of 60 cum/hr.) minimum or equivalent capacity in different configuration at casting yard with suitable arrangements for proper	2 batching plants of 60 cum /hr capacity seems to be on higher side considering the quantum of the project. It is requested that the contractor be allowed to select the capacity and numbers as per his program. Also, contractor may be asked to submit an underatking to provide uninterrupted concrete supply for the project. Kindly consider.	Please refere Corrigendum-I
31	Part - 1	77/Clause No. 5		Please increase the max. permissible age of the hydraulic rig to 10 years and oblige.	Not accepted. Tender conditions prev
32	Part - 2	21/Clause No. 2.1.1. 38)	Permissions and clearances -	We request that the permissions and clearances from all the departments be taken care of by Employer and oblige.	
33	Part - 3	70/Clause No.19.2.3	of awarded cost of Schedule-B of Bill of quantity, for any one incident / accident (AOA) with number of incidents / accidents two in any one year (AOY), 5% of AOA limit, Validity DLP + 3 Years	We request you to reduce the limit of professional indemnity insurance to 3% as practised by most of the government organizations. Also period for maintenance of this insurance may be kept till completion of the project. Requirement to maintain this insurance for longer period will add to the cost of the project.	

(Annexure-A

					(Annexure-A)
	Design and (	Construction of Elev	6	etween Ch: (-) 289.668 m to Ch: (-) 5622.577 m in Reac n <b>No: N2-010/C-04/2023</b>	h-4A of NMRP Phase-2
Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
34	Part -3	10/Clause No. 8.8		It is requested that the clauses may be suitably modified to make it equitable.We propose that maximum ceiling for LD and incentive be kept at 5% of contract price. Kindly consider and oblige.	
35	General Conditions Of Contracts	General Conditions Of Contracts	No Plant & Machinary Advance	We request you to provide Plant & Machinery Advance for an amount equal to 90% of value of Plant & Machinery brought to site. Recovery of Plant & Machinery advance may be made on pro rata basis as per CPWD standard guidelines.	
36	General Conditions Of Contracts	General Conditions Of Contracts	No Material Advance/Secured Advance	We request you to provide secured advance for an amount equal to 90% of value of material brought to site. Recovery of secured advance may be made in proportion of the consumption of materials as per CPWD standard guidelines.	
37	Part - 2	General Conditions Of Contracts	Establishment of Labour Camps, Store Offices, Batching Plants, Casting Yards	We request you to provide the land for temporary facilities like installation of Establishment of Labour Camps, Store Offices, Batching Plants, Casting Yards	Not accepted. Tender conditions prev
38	Part - 3				Not accepted. Tender conditions prevails

the case may be).

Sr. No.	Reference Volume	Reference Section	Reference to tender document clause	Queries	Employer's Response
39	Submission date			The tenders are invited on partly EPC and partly item rate basis. A design consultant will have to be appointed to carry out the preliminary design, site and other contractual inputs will have to be provided so as to enable consultant to prepare the BOQ. The BOQ so received shall then be verified for correctness and optimization and rates for individual items to be worked out to arrive at the price to be quoted. Also, several forms related to financial information of the company are required to be submitted with bid. Such information will have to obtained from head office. In view of the quantum and complexity of the work involved, we hereby request you to kindly extend the due date of submission of bid to atleast 3 weeks after issue of prebid clarifications.	issued if Bid-Schedule is changed. There is no change in Bid-Schedule so far.
40	Part-3			As per CPWD conditions performance security is 3% of contract value we request you to give performance security up to 3%	•
41	Part-3	60/Clause No. 14.2	Mobilization Advance: interest bearing Mobilization advance shall be 10% of original contract value payable in two equal instalments of 5% (Five Percent) each in the currencies and proportions of the Accepted Contract Amount Rate of interest shall be charged at "RBI Bank Rate+2% (Two percent)" simple interest. Interest will be chargeable and calculated on reducing balance method.		Not accepted. Tender conditions prevails

# S.15 : Specification of Powder Coating on Railing in Viaduct

### 1. Material Specification:

The material to be used for railing shall be of Mild Steel (as specified in tender drawing) and grade Yst 310 confirming to IS 4923. Each lot shall be tested as per the approved frequency as per relevant Indian / International standards.

#### 2. Fabrication:

Fabrication shall be done in an approved yard/workshop. Prior to fabrication, the contractor shall obtain "No Objection" from the engineer-in-charge for the workshop/yard and the design. The design shall be approved in concurrence with Engineer-In-Charge/Maha metro and no additional charges shall be given for any type of design/pattern. It's the responsibility of the contractor to co-ordinate with Maha-Metro and GC for obtaining relevant design/pattern approval.

Welding of all sections shall be done as per relevant codal provisions. Unless otherwise stated, all joints shall be gas welded and welding shall be of highest quality without any porosity and flaws. Further, test report for welded joints shall be submitted. Nothing extra will be paid on the account of testing.

#### 3. Coating:

Coating of fabricated railing shall be done only after the successful inspection of the welding by the engineer in charge.

All the fabricated railing shall be powder coated with a Grade 'C' – matt finish as per IS 13871 latest revisions. Overall DFT shall be above 100 microns. Powder coating shall fulfill the requirements as detailed in table-1 of IS 13871(Latest revision).

#### 4. Surface Preparation:

Surface preparation to be done by a variety of chemical or mechanical method as required for the structural element. Thus, the structural element (fabricated) shall be free from oil, dirt, lubrication greases, metal oxides, welding scale etc, and prior to the powder coating process, abrasive blasting or sand blasting shall be carried out as per relevant SSPC specification.

Chemical pre-treatments involve the use of phosphates or chromates in submission or spray application, if required. The pre-treatment process both cleans and improves bonding of the powder to the metal.

#### 5. Powder Application Processes:

Application of powder coating is done by spraying the powder using an electrostatic gun using appropriate spray nozzles, to provide a uniform coating. Pre-heating provision shall be explored as and when required to deliver a uniform smooth finish. Powder can also be applied using specifically adopted electrostatic discs.

The contractor is required to submit the method statement of application prior to the commencement of work.

### 6. Curing:

The curing method shall be done as per the manufacturer's specifications. The contractor shall adopt the latest suitable method for curing system.

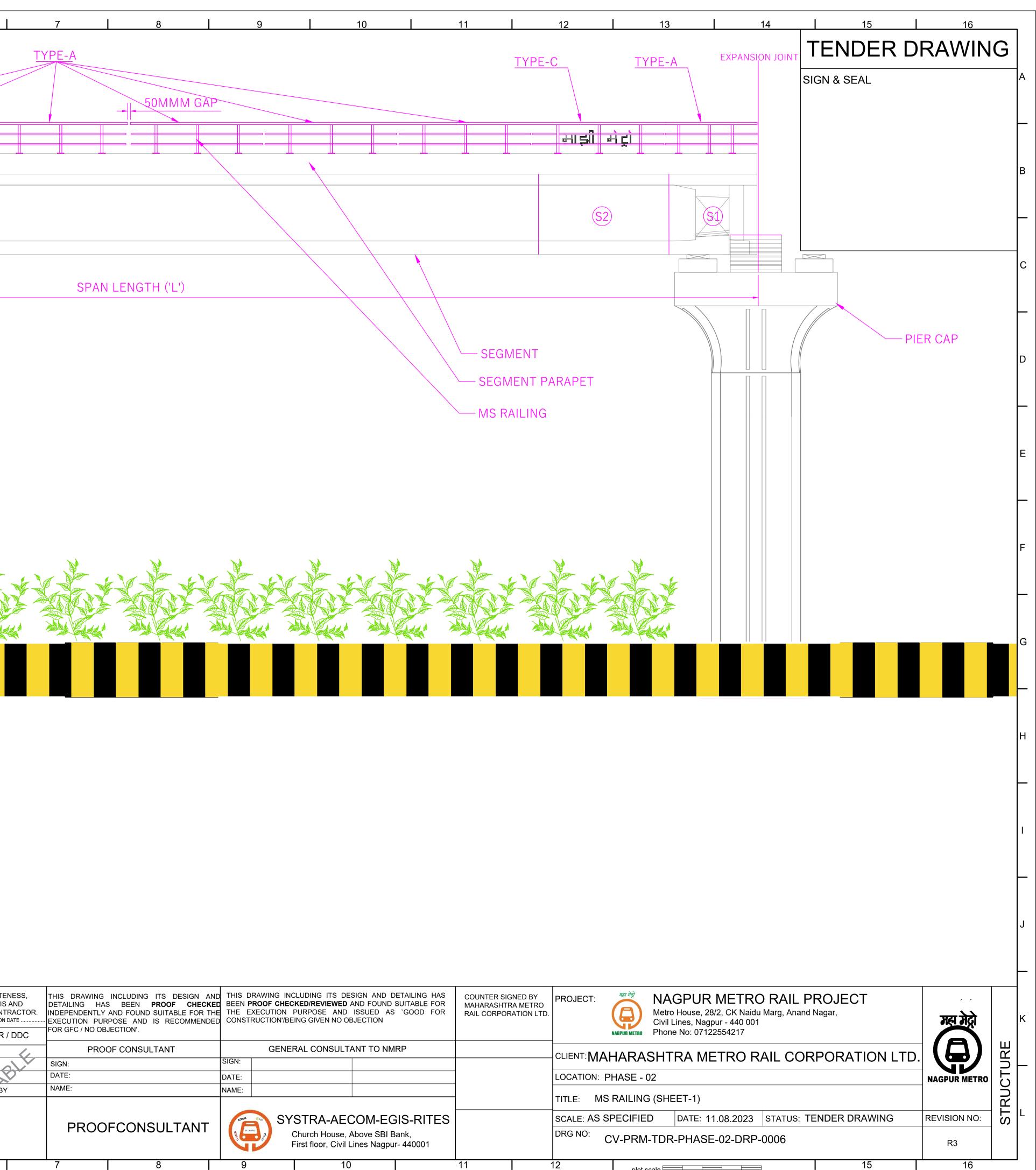
#### 7. Erection:

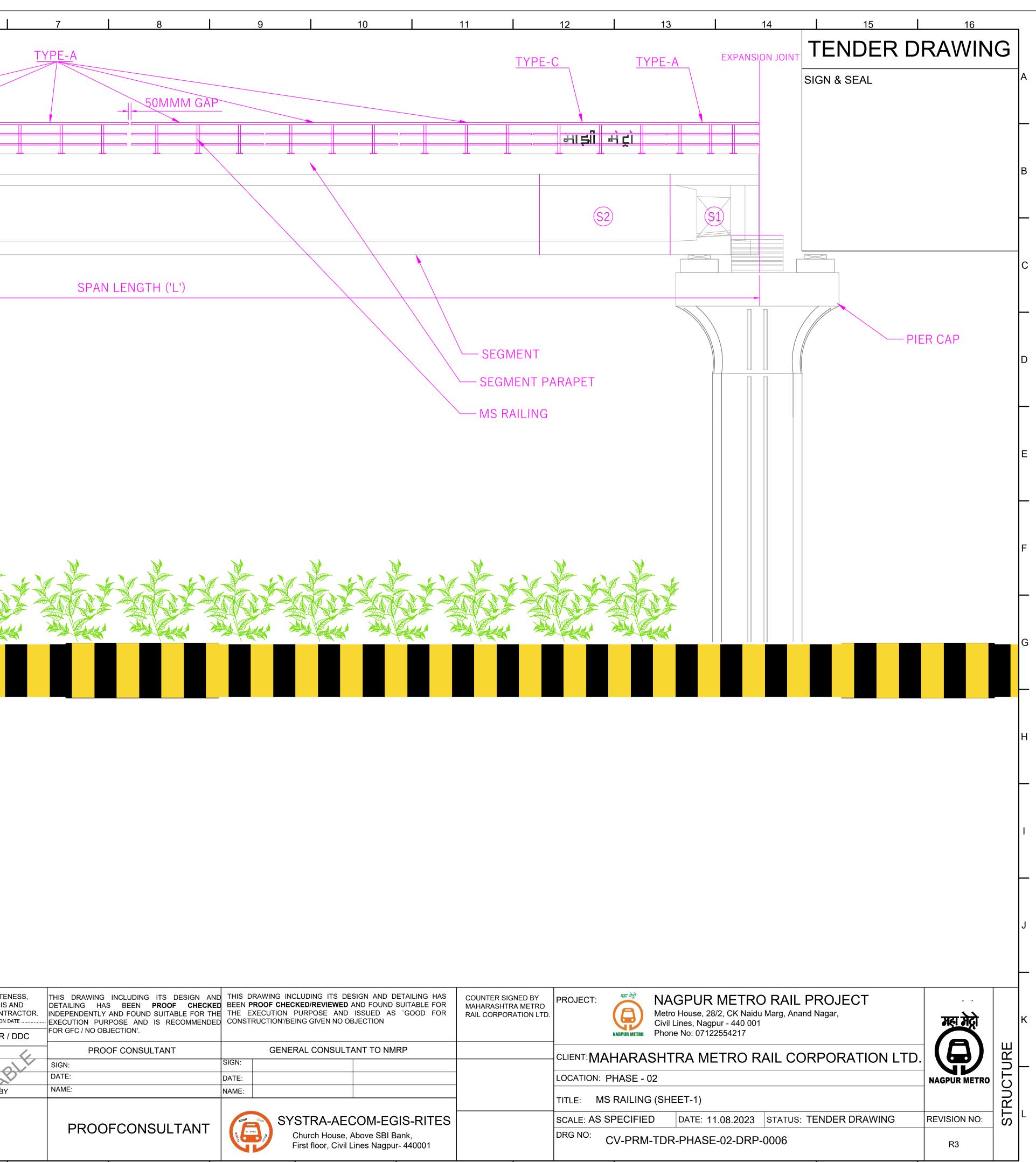
Fixing of handrail shall be done with the hot dip galvanized bolts provided in the segment parapet. As stated in the scope of work, providing hot dip galvanized bolt, is in the lumpsum scope of viaduct. Additional check nut shall be provided. Nothing extra will be paid on the account of above.

The contractor shall submit the design along with its calculation to the engineer-in-charge for approval prior to erection.

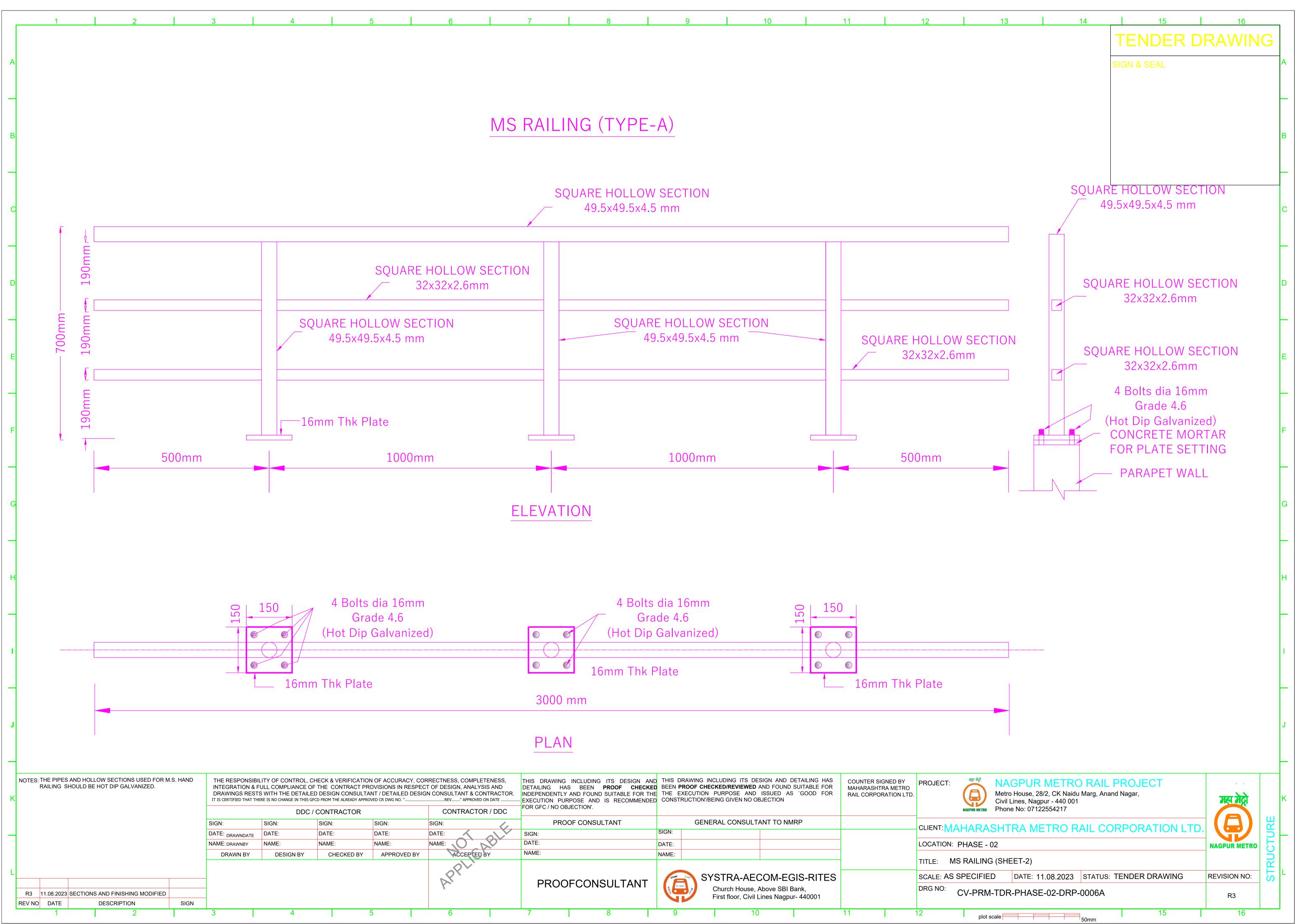
The contractor will be solely responsible for any damages during transportation and erection.

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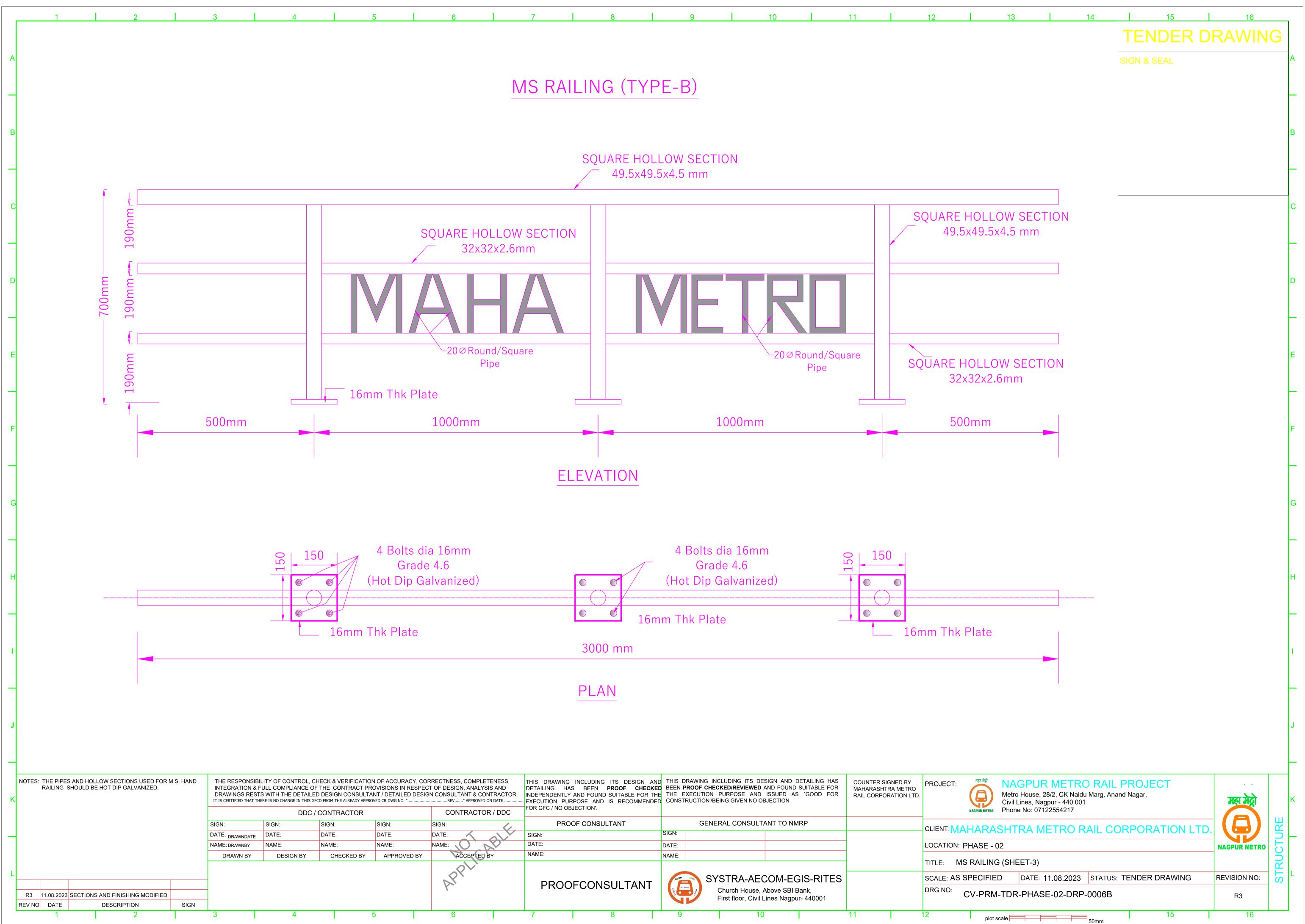


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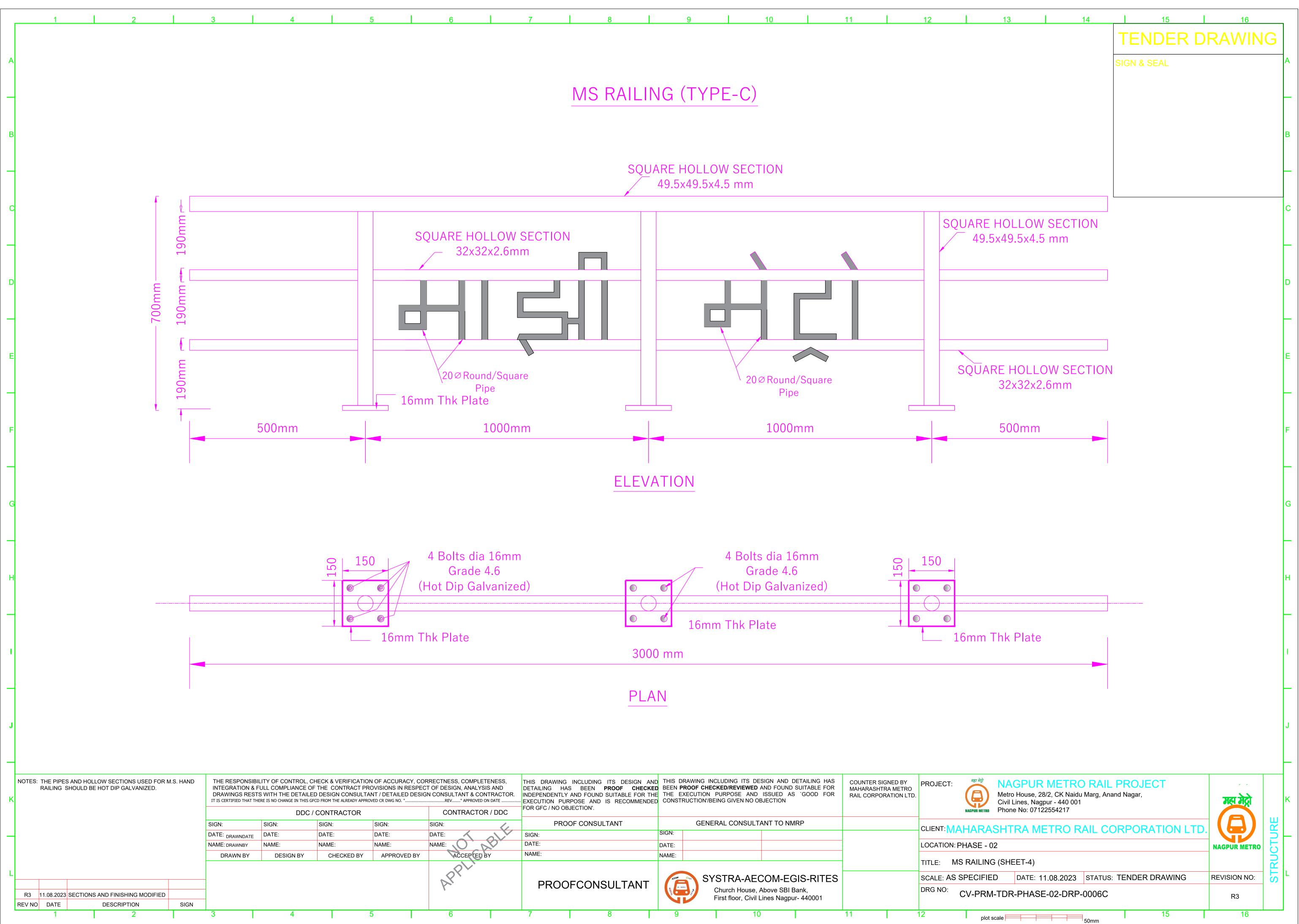
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## S.16 : Specification for FRP manhole cover

#### 1. Material Specification:

Manhole cover and its supporting frame shall be of FRP material. Cover shall have a clear opening of 600mm x 600mm with abrasion resistant top layer with locking and lifting arrangement. Cover and fame shall be UV, chemical, weather, and high impact resistant. FRP cover shall have 2.5 tons load bearing capacity.

Contractor shall submit the manufacturer's specification for the approval of Engineer In-Charge/Maha-Metro.

Testing shall be carried out as per manufacturer's specification and in line with BS EN 124, IS 1726 and AASHTO. Nothing extra will be paid for the testing.

#### 2. Fixing of cover.

Concrete bed shall be prepared considering the height of the frame. Frame shall be completely embedded in a minimum of M-35 grade concrete. The level of concrete bed must be flat so that entire frame is uniformly supported. The frame after fixing must be allowed to rest in concrete for a minimum of 48 hours before its use.

Contractor shall submit drawing for approval of Engineer In-Charge/Maha-Metro prior to the start of work.