

**Addendum- 02**  
**CMRL / PHASE – II / SYS / ASA07 / 2021**  
**03-03-2022**

SN	Part	Section	Clause	Original Bid condition	Revised bid condition
1	Part – 2	Section VI A Employer's Requirements- Appendices	Appendix-10 Site Accommodation for The Engineer	NA	Not used
2	Part – 2	Section – VI B Particular Specification	Clause No: 2.3.6  Page No: 318	The Contractor shall provide facilities and resources necessary for the Engineer and the Employer in the site office as per GS Appendix 10.	The Contractor shall provide one lockable room (minimum 10 Square meter) for the engineer/employer in his site office. The room shall be equipped with air conditioning, furnitures and power supply sockets,
3	Part – 2	Section VI A Employer's Requirements- Appendices	APPENDIX-1 DRAWING LIST	NA	Refer the Revised Drawings
4	Part – 2	Section – VI B Particular Specification	Clause No: 2.1.2.7.a)  Page No: 314	The Contractor shall co-ordinate with Civil Works Project Contractors in order to provide comments or recommendation on station and depot building materials, finishes, architectural layouts, installation requirements for antenna supports, availability of proper cable duct, mounting arrangements for Leaky Co-Axial Cables (LCX) and other cables in the tunnels and elsewhere. This shall, wherever required, also include necessary co-ordination with the civil works contractor for the erection of towers on the roof/over the lift shafts/ at ground level to support the TETRA antennae at the required heights to meet the coverage objectives. Majority of the stations are designed to cater to 12 meter roof top tower (20 + 12 meters above ground level). Based on the coverage study, contractor has to coordinate for final locations.	The Contractor shall co-ordinate with Civil Works Project Contractors in order to provide comments or recommendation on station and depot building materials, finishes, architectural layouts, installation requirements for antenna supports, availability of proper cable duct, mounting arrangements for Leaky Co-Axial Cables (LCX) and other cables in the tunnels and elsewhere. This shall, wherever required, also include necessary co-ordination with the civil works contractor for the erection of towers on the roof/over the lift shafts/ at ground level to support the TETRA antennae at the required heights to meet the coverage objectives. Majority of the elevated station entry structures are having a Height of 12 mtr from ground and the entry structure can accommodate a 20 meter roof top tower. 12 mtr Station Entry structure height from ground level + 20 meters Roof top tower height. Combined arrangement can attain a height of 32 mtr above ground level.
5	Part – 2	Section – VI B Particular Specification	Clause No: 6.3.2.3.  Page No: 364	Development of the Acoustic study for the PAS in stations and Depots.	Not used
6	Part – 2	Section – VI B Particular Specification	Clause No: 6.16.3  Page No: 373	The minimum protection required shall be as follows: a) IP 52 for equipment within the Equipment Rooms and Control Rooms; b) IP 54 for internal train borne equipment. c) IP 55 for equipment which is located within covered areas and not exposed to the external environment; d) IP 65 for equipment, which is fully exposed to the elements. e) IP 67 for external train borne equipment	6.16.3. The minimum protection required shall be as follows: a) IP 52 for all equipment enclosures to be installed in equipment and control rooms which includes active electronic equipments, Termination racks, Power supply equipment, distribution boxes etc. In case if the contractor propose a lower IP rating, the contractor shall ensure that the cabinets/enclosures shall have provision to protect water ingress from water dripping from above using suitable means as approved by the engineer. b) IP 20 for internal train borne equipment which are housed in IP 54 Enclosures. IP 54 for all Tetra radio equipment accessed by the Train Driver/Roving attendant. c) IP 55 for equipment which is located within covered areas and not exposed to the external environment; d) IP 65 for equipment, which is fully exposed to the elements. e) IP 65 for external train borne equipment
7	Part – 2	Section – VI B Particular Specification	Clause No: 16.1.5.22.  Page No: 434	The interface shall provide the necessary means to enable OCC to initiate triggering of pre-recorded messages in the on-train public address system. The interface should support dispatching of play list (Multiple messages and announcement schedules) to on-board PA from OCC. The interface design shall allow the OCC to make pre-defined announcements by selecting one or more audio zones available in the train (saloon, exterior etc.).	The interface shall provide the necessary means to enable OCC to initiate triggering of pre-recorded messages in the on-train public address system. The interface design shall allow the OCC to make pre-defined announcements by selecting one or more audio zones available in the train (saloon, exterior etc.). This interface, as a Preferred Requirement ( Possibility to be examined in the design phase and shall be implemented, if feasible), shall support dispatching of play list (Multiple messages and announcement schedules) to on-board PA from OCC.
8	Part – 2	Section – VI B Particular Specification	Clause No: 3.4.8.4.e.vi  Page No: 329	RCW system shall enable the operator to perform scheduling of Prerecorded messages from RCW.	RCW system, as a Preferred Requirement ( Possibility to be examined in the design phase and shall be implemented, if feasible), shall enable the operator to perform scheduling of Prerecorded messages from RCW.

9	Part – 2	Section – VI A General Specification	Clause No: 13.17.10.e  Page No: 64		Add the following after 13.17.10.e 14.IS & CYBER Security Technical Requirements Indicative IS & Cyber security requirements (but not limited to) for entire CMRL phase II systems and is placed as Appendix -19 of this GS document. Contractor shall comply with given Cyber security requirements as applicable to their respective system. As a part of Cyber security requirements, Employer/Engineer will appoint/nominate a Concessionaire (CISO & associates) with whom Contractor shall liaise for receiving further guidelines and instruction and necessary compliance. Contractor shall refer Technical Specification document also for compliance with other additional Cyber security requirement.
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