

<b>Metro Manila Subway Project Phase 1 Package CP106: E&amp;M Systems and Track Works</b>			
<b>ITEM NO.</b>	<b>REFERENCE/CLAUSE/SECTION</b>	<b>QUERIES</b>	<b>RESPONSE</b>
<i>Volume II, Part 2 – Employer’s Requirements, c) Technical Requirements (ERT)</i>			
1.	01 Track works _12 Dec 2019 (PA) Clause: 1.18 (1) Page: TRW-1-47	Please provide the track alignment drawings as detailed in this clause to allow the determination of Buffer stops.	Please refer Annex C of GBB No.6, for details.
2.	01 Track works _12 Dec 2019 (PA) Clause: 1.20 (1) Page: TRW-1-47	Please provide the drawing as detailed in this clause to allow the determination of Staff Walkways in the Depot.	Please refer to item 4 of GBB No. 10
3.	08 Maintenance Vehicle and Depot Equipment_12 Dec 2019 (PA) Clause: 8.8.2 Page: MVDE-8-9	In this document is mentioned 19 trains of 8 cars by 2025. In other documents, it was mentioned 30 trains of 8 cars by 2025. Please confirm the number of trains to consider.	30 trains of 8 cars by 2025.
4.	03 Telecommunication System_12 Dec 2019 (PA) Clause: 3.7.6 Page: TEL-3-48	Telecom Contractor shall supply a SIL2 signal to the Onboard HMI and CCTV viewing console, in a deterministic manner. Millimetre Wave Platform Screen Monitoring System shall be designed in accordance and, compliant to SIL2 requirements.	The proposal from Contractor during detailed design can be discussed and will be acceptable with respect to appropriate SIL level.

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		<p>Please clarify that the deterministic way is evidence through calculation, based on the design, that the function provided by the system as a certain Tolerable Hazard Rate (THR)</p> <p>SIL 2 -&gt; <math>10^{-7} \leq \text{THR} &lt; 10^{-6}</math></p>	
5.	<p>02_CP106_P2_S(VI)_ER(ERG)_Appendix17_12 Dec_2019 (PA) Clause: 6.2 Page: ERG-App 17-6</p>	<p>The following systems/sub-systems must be designed to the following Safety Integrity Levels, in accordance with EN 50128 requirements;</p> <p>MSN Tel and Wireless LAN Radio Recording System Intercommunication Disaster Prevention System</p> <p>According with the industry normal practise, the targets for functions delivered by the above systems is SIL 0 or SIL1. Kindly advise if it is acceptable to be re-allocated the SIL to appropriate in accordance with functional safety standards.</p>	<p>Yes, It is acceptable to re-allocate the SIL rating to a tolerable risk acceptance rating in accordance with safety standards. This is also subject to the RAM &amp; Safety Analysis report produced by the Contractor.</p>
6.	<p>03 Telecommunication System_12 Dec 2019 (PA) &amp; Drawings_19 Dec 2019 Clause: 3.7.5 / 3.8.5</p>	<p>Based on the diagrams, Depot will be connected to standalone separate network ring that does not have any connection to OCC or MSN? Is that correct?</p>	<p>No, Bidders understanding is incorrect. Depot is not on a standalone separate network. Depot network shall connect</p>

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	Page: TEL-3-46 / 85		to OCC or MSN.  Depot shall have ring network connecting to OCC and managed by centralized NMS (network Management system) from single centralized MSN system. No two separate MSN network management system in MMSP.
7.	3 Telecommunication System_12 Dec 2019 (PA) Clause: 3.7.5 Page: TEL-3-44	Are Security House and Security Room two different locations? Security House is in Depot and Security Room is in OCC?	No, Bidders understanding is incorrect. Security room and Security house are in two different location. (I) Security room will be inside the OCC Building. (II) Security house is located inside Depot area for Depot security purpose.
8.	03 Telecommunication System_12 Dec 2019 (PA) Clause: 3.7.5	Please provide the number of monitors to be installed in OCC/BOCC, depot security room, station control room and	This is Design and Build Contract. The Contractor to develop the OCC & BOCC (emergency use only)

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	Page: TEL-3-43, TEL-3-44	station security rooms. Please provide monitor screen dimension if any.	Workstation arrangement with Screen layout for The Engineer approval and The Employer acceptance with O&M Concessionaire.
9.	00_CP106_P2_S(VI)_SOW_ER(E RG)_12 Dec 2019_FINAL (PA) Clause: 13.1.3 Page: ERG-74	Regarding MTBF target, generally is given as equal or greater ( $\geq$ ) than a certain value (e.g. MTBF $\geq$ 5000 hours). Please confirm.	Yes, Bidder's understanding is correct. Full MTBF assessment to be conducted by the Contractor for The Engineer approval and The Employer acceptance.
10.	00_CP106_P2_S(VI)_SOW_ER(E RG)_12 Dec 2019_FINAL (PA) Clause: 13.1.1 Page: ERG-68	Can the same person combine the Role of RAM Manager and Safety Manager (RAMS Manager)? Please clarify.	No objection, it's either of the key personnel. Key personnel will be under evaluation of the employer and engineer. Please take note, Safety Manager is referring to System Safety Manager but not Occupational Health and Safety Manager.
11.	00_CP106_P2_S(VI)_SOW_ER(E RG)_12 Dec 2019_FINAL (PA) Clause: 12.5.1 and 13.1.1 Page: ERG-50 and ERG-38	(12.5.1) The contractor must develop Safety Critical Items List (SCIL) sparing to a 99% confidence interval. (13.1.1) The contractor must develop a Reliability Critical Items List (RCIL) and sparing to a 99% confidence interval.	Yes, bidder's understanding is correct. All subject to the system safety assurance and analysis report produced by Contractor for the system architecture during detailed design

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		The contractor must provide a schedule for LRU and LLRU sparing to a 99% confidence interval. SCIL-> confidence level 99% RCIL-> confidence level 99% Remaining parts -> please confirm that the target is also 99%.	stage.
12.	02_CP106_P2_S(VI)_ER(ERG)_Appendix17_12 Dec_2019 (PA) Clause: - Page: ERG-App 17	Please clarify the demonstration period required. (X months->Partial commencement) (X months->Commencement of full train)	Contractor shall propose the demonstration period required based on updated Key Dates and Access Dates described in items 10 and 11 of Annex B in the GBB No. 1.
13.	04 Power Supply System_12 Dec 2019 (PA) Clause: 4.10.14, bullet 7 Page: POW-4-85	"The SCADA shall also have the provision for plugging in a portable control console (laptop) with the RTU. It shall be possible to operate and monitor the status and alarm conditions of all equipment from this local control console." Does the laptop shall able to plug in with the RTU directly? "to operate and monitor the status and alarm conditions of all equipment from this local control console" is respect with plugging directly to RTU? Or these 2 statements are not co-related?	Yes, provision for a Laptop to plug directly into the RTU and monitor the status of all equipment alarm conditions from the local control console.
14.	Bid Bulletin No.1 Clause: Item 23	For Station East Valenzuela station, referencing to bid bulletin no. 1:	1. Yes, the station is separate building from Depot.

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	Page: 10 of 15	<p>1. This station is a separate building with the Depot?</p> <p>2. This station has any BSS, TSS or SSS? It has not clearly mention in the requirement.</p> <p>3. According to High Level Schedule, the Manufacturing/Delivery only plan to start on Jul-2020. Would like to clarify the level of "available for demonstration in 2022" (i.e. The Server, Workstation and HMI for this station need to ready by 2020?).</p>	<p>2. This station shall have only SSS.</p> <p>Contractor may propose the basic equipment for this demonstration during the Design phase for the Engineer to review and approve with the Employer and O&amp;M Concessionaire..</p>
15.	<p>04 Power Supply System_12 Dec 2019 (PA)</p> <p>Clause: 4.10.9 bullet 5</p> <p>Page: POW-4-83</p>	<p>In this requirement, Safety Critical systems for PSCADA including "Fire detection in substations" is required to be displayed.</p> <p>In which interface will PSCADA get this Fire detection alarm in substations?</p>	<p>Interface with the BMS system for the Fire detection alarm in substations Contractor to coordinate with the Civil contractor to define detailed interface during detailed design stage.</p>
16.	<p>04 Power Supply System_12 Dec 2019 (PA)</p> <p>Clause: Section 2.5.11 Table 2.5.5 /</p> <p>Section 4.10.1-bullet 1</p> <p>Page: SIG-2-33 / POW-4-78</p>	<p>In Table 2.5.5 of Section 2 Signalling requirement, PSCADA needs to provide 2 terminals only; while in PSCADA requirement 3 displays need to be provided.</p> <p>Please confirm the quantity of PSCADA workstations and monitors needed to be provided for Power Controller in OCC.</p>	<p>P-SCADA shall be a dual redundant parallel running so two terminals is of adequate; however, this shall be discussed at the detailed design level to determine if additional terminal is required.</p>

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17.	04 Power Supply System_12 Dec 2019 (PA) Clause: 4.10.2 & 4.4.4 Page: POW-4-79 / POW-4-25	<p>According to 4.10.2, "The power SCADA system shall be compliant with the standard shown below:</p> <ol style="list-style-type: none"> <li>1. JIS, Japanese Industrial Standard;</li> <li>2. ISO, International Organization for Standardization;</li> <li>3. JEITA, Japan Electronics and Information Technology Industry Association;</li> <li>4. IEC, International Electro-technical Commission; and</li> <li>5. IEEE 802.3 series, Standard for Ethernet based LAN system."</li> </ol> <p>This requirement is a high-level requirement, please specify which requirement on Section 4.4.4 need to be fulfilled by PSCADA,</p>	<p>Detailed design to comply with the latest standards applicable to SCADA. The Standards shall include but not limited to the following: EN50122, IEC 62128, EN 50310, IEC 60050, IEC 60364, EN 62040, IEEE 802 Series, EN 60529, IEC 60870, EN 60950, EN 60870, EN 6385, IEC 60617, IEC 61850, IEC 60255, IEC 61131 etc.</p>
18.	02 Signaling System_12 Dec 2019 (PA) Clause: 2.5.4.2 Page: SIG-2-17	<p>Please confirm that CBTC and ETCS are independent system (both hardware and software level) from each other. For example, the DMI (Driver Machine Interface) and TG (Tacho generator) in CBTC are independent from those of ETCS.</p>	<p>The bidder's understanding is correct, CBTC and ETCS are independent systems in totality including the DMI and Tacho-generator are independent from both signaling system.</p>