

ADDENDUM No.2

N.I.T. No. SMP/KDS/Mech/C/ADV/615 dated 06.09.2022

Tender for “Rehabilitation of Bascule Bridge at KDS, SMPK”

(Pursuant to the queries raised by the intending bidders in the pre-bid meeting held on 19.10.2022, SMPK’s clarifications /decisions/amendments as have been finalised and frozen thereon are given below:-)

| Sl. No. | Relevant tender clause/item no. | Submission by the intending tenderer | SMPK’s decision /clarifications |
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| <i>1.</i> | | Could you provide us with design criteria for the mechanical components? In detail, we would be interested in bridge opening/closing time requirements, assumption on bridge weight, COG, basic assumptions on how the 45 kW motor power was defined etc. | Machinery sizing was performed in accordance with AASHTO Movable Highway Bridge Design Specifications. This provides several loading conditions for sizing the prime mover, brakes, and driven machinery components. The AASHTO ice loading was <u>not</u> applied for motor sizing. The operating time used for sizing is 63 seconds, including 10 second acceleration and deceleration. Total span + counterweight weight was estimated to be 3,000,000 lbs. The span balance is currently (at the time of design) extremely counterweight-heavy. Adjusting the span balance is a repair item. For motor sizing, imbalance was assumed to be 6,000 lb toe heavy when seated (span-heavy), with an imbalance angle of -20 deg (20 deg below horizontal, toward the toe). |

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| 2. | | Does SMPK have the design parameters for the new machinery brake? | It is required that the new motor and machinery brakes be sized to the AASHTO Movable Highway Bridge Design Specifications. |
| 3. | | Is there any requirement for any mechanical emergency operation system? | The bridge has an existing auxiliary drive system. |
| 4. | | What is the strategy for the greasing of the open gearing system? Can we assume manual maintenance? | All of the machinery is accessible for maintenance. Direct application of lubrication to gearing and bearings is common practice and can be assumed here. |
| 5. | | Kindly please intimate us the Final Shade of Painting on structural components of the bridge. | Match the existing shade and color. |
| 6. | | The grades of Structural Steel Sections indicated in your tender Document conforms to American standards (ASTM). Kindly allow us to consider the structural steel sections based on equivalent European or Indian standards. | It will be acceptable to provide European or Indian standard structural steel material if adequate material certifications are provided to show that the material to be provided meets or exceeds the requirements of the materials specified in the tender document. |
| 7. | | The Bridge shall have to be constructed as per AASHTO LRFD Specifications as per Cl. No. 3.6.3 (Sub-Clause D & E) of NIT/Tender Document. Kindly allow us to consider the Bridge Construction based on equivalent European or Indian standards and specifications. | Bridge construction and design must be in accordance with AASHTO LRFD Specifications. |
| 8. | | We request to provide the equivalent Indian Standards as alternate to ASTM Codes, etc. for the increase/ease in local procurement, etc. | It will be acceptable to provide European or Indian standard structural steel material if adequate material certifications are provided to show that the material to be provided meets or exceeds the requirements of the materials specified in the tender document. |
| 9. | | Kindly specify the structural steel material Grade i.e. IS 2062E250 Gr. Or E350 Gr. Also specify the IS grade for Reinforcement steel | “Steel Structures” Section 3.6.4 of the Scope of Work specifies ASTM A709/A709M Grade 345, unless noted otherwise for structural steel plates and |

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| | | i.e.FE-500D/550D. | shapes. “Concrete Structures” Section 4.0.B.(a) specifies ASTM A615/A615M, grade 420, deformed for steel reinforcing bars. Alternate materials can be provided if adequate material certifications are provided to show that the material to be provided meets or exceeds the requirements of the materials specified in the tender document. |
| 10. | | Dry film thickness as per Painting specification is 3 mil to 5 mil which is approx. 50 micron variance. Hence it is difficult for bidder to ascertain the cost against exact dry film thickness. Kindly provide us the exact DFT for each type of paint. | The coat thickness for each type of paint is acceptable if the dry film thickness provided is within the range specified. If the coat thickness falls outside of the range specified, corrective measures will be required. |
| 11. | | Kindly provide us the specific code for surface preparation works i.e. SA 2.5 or others. | Surface preparation for painting shall be in accordance with SSPC-SP2 or SSPC-SP3 as specified in “Steel Cleaning and Painting” Section 3.7.5 (J) of the Scope of Work . |
| 12. | | Kindly provide us the details specification and DFT for epoxy coating in reinforcement bar. | Epoxy coating of steel reinforcement bars shall be in accordance with ASTM A775 per “Concrete Structures” Section 3.5.4 B.(a) of the Scope of Work. The ASTM specification indicates the DFT dependent on the bar size. |
| 13. | | Kindly provide us the enlisted/experienced vendor for the following works : 1. Electric Motor Service 2. Control System | <i>SMPK do not have any enlisted/experienced vendor. The following list has been provided by our Consultant. However, the contractor shall maintain the essential requirement as stipulated in NIT while selecting vendor/s for particular discipline/branch of the project.</i> 1, 2: (Integrators) •Faith David Cotte – 920-225-6500 •Panatrol Bruce Krebbers – 630-655-4700 |

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| | | | <ul style="list-style-type: none"> •EHM Mike Hanley – 954-981-0023 •Champion Controls Patrick Boyd – 954-318-3090 •Benfield Control Systems John Cerchio – 914-948-321 |
| 14. | | <p>Kindly provide us the approved vendor list for the following items :</p> <ol style="list-style-type: none"> 1. Power Cable 2. Control Cable 3. Submarine Cable 4. Fiber Optical cable 5. Variable Frequency Drive (VFD) 6. Main Drive Motor 7. Other Electrical and Instrumentation Items vendor | <p><i>SMPK do not have any approved vendor list. The following list has been provided by our Consultant. However, the contractor shall maintain the essential requirement as stipulated in NIT while selecting vendor/s for particular discipline/branch of the project.</i></p> <p>1, 2, 4:</p> <ul style="list-style-type: none"> • Okanite • Belden • Allied Wire and Cable <p>3:</p> <ul style="list-style-type: none"> • Champlain • Draka Prysmian Group <p>5:</p> <ul style="list-style-type: none"> • Allen-Bradley • Yaskawa • Emerson • Danfoss • ABB <p>6.</p> <ul style="list-style-type: none"> • Baldor • Nord • Marathon • ABB |

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| | | | <p>7.</p> <ul style="list-style-type: none"> • Siemens • Square D • Phoenix Contact • Allen-Bradley |
| 15. | | Bidder understands that suitable area to be provided to bidder for their office, storage of materials and fabrication works etc. in free of charge. | <i>Already indicated in Clause 9 under Annexure-D.</i> |
| 16. | Clause 2 (o) at page 10 under Annexure-B Terms and conditions of Tender | In case of Pre-bid Collaboration/Tie up with foreign partners, please clarify whether the clause is applicable. | <i>Clause No. 2(o) is applicable for Joint Venture only.</i> |
| 17. | Sl.No.1 of Clause no.2.2 at page 108 under Annexure-D Special Conditions of Contract | <p><i>(The query has been reframed for clarity) :</i></p> <p>Request for release of 7% of Contract Price as against release of 2% of Contract price (existing term) on approval of Release for Constn (RFC) Design Calculations, Plans and Special provisions w.r.t. mechanical, electrical and structural system with broad Technical parameters and drawing of the scheme</p> | <i>Original Terms at Sl. No. 1 under Clause no.2.2 of Annexure-D remains unchanged. For further details refer Revised Payment Terms at Sl. No. 24 at the end of this table of contents.*</i> |
| 18. | | As per Clause 2.2 (Payment Stages), Sub-Clauses 11 through 15, an amount equivalent to 10% of the Contract Price shall be retained by you and shall be released @ 2% per year for 05 years (covering the Warranty Period). In this connection, we would like to request you to consider retention @ 1% per year for 5 years (covering the Warranty Period) so as to maintain adequate Cash Flow for the project in the absence of any Mobilization Advance. | <i>Payment Terms is revised and accordingly, the revised Clause no. 2.2 under Annexure-D is reproduced at the end of this table of contents at Sl. No. 24.*</i> |
| 19. | | We request to inform us about the proposed durations | <i>It is desirable that during the entire period of</i> |

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| | | of Road traffic Block & Channel Navigation (Water way traffic) Block to be made available during execution. | <i>repair, disruption to vehicular traffic as well as shipping is kept at the minimum. However, it is envisaged that there would be a marine outage of approximately three months and stoppage of vehicular traffic for one week.</i> |
| 20. | | Kindly also let us know of the procedure for TRAFFIC BLOCKADES for carrying out the Construction works on the Bridge. | <i>Contractor shall inform SMPK officially at least two weeks prior to planned road traffic blockade. Liaison with Local Administration/Police shall be done by SMPK.</i> |
| 21. | | Total completion period for the work is 11 month which is very much lower side considering job volume w.r.t to design, engineering, preparation of BOQ, procurement and site execution etc. Kindly arrange to make completion period for the work is 18 Month. | <i>Completion time is revised to 18 months instead of 11 months. All other terms under Clause no.5 of Annexure-D remain same.</i> |
| 22. | | We will require more time for gathering more information, tie up with interested partners, etc. So, we request to extend the due date of submission by 45 days from current due date of submission. Please confirm. | <i>Due date is extended as per the following:- a) Date of closing of online submission of bid : 30.11.2022 up to 15:00 hrs. b) Date of opening of bid: At 15:30 hrs. on 30.11.2022</i> |
| 23. | | | <i>In all the Engineering Drawings provided with the NIT, wherever indicated, the word “Design-Build Team” or “DBT” shall be replaced by the word “Contractor”.</i> |

***Sl.No. 24. Revised Payment Terms:-**

Clause no. 2.2 Payment Stages:

(As given in NIT)

| Sl.No. | % of the Contract Price except applicable | Payment to be released on achievement of the following |
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| | taxes, duties and levies in India | milestone |
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| 1. | 2% | On approval of Release for Construction (RFC) Design Calculations, Plans and Special provisions w.r.t mechanical, electrical and structural system with broad Technical parameters and drawing of the scheme. |
| 2. | 8.5% | On completion of supply & delivery of all mechanical items as certified by SMPK appointed Third Party Inspecting Agency and/or Consultant as applicable |
| 3. | 25% | On completion of supply & delivery of all electrical items as certified by SMPK appointed Third Party Inspecting Agency and/or Consultant as applicable |
| 4. | 5% | On completion of supply & delivery of all structural items as certified by SMPK appointed Third Party Inspecting Agency and/or Consultant as applicable |
| 5. | 1.5% | Completion of Structural Rehabilitation (BoQ item no. 1-13) as certified by SMPK appointed Third Party Inspecting Agency and/or Consultant as applicable |
| 6. | 4% | Completion of Mechanical Rehabilitation (BoQ item no. 14 -15) as certified by SMPK appointed Third Party Inspecting Agency and/or Consultant as applicable |
| 7. | 26% | Completion of Electrical Rehabilitation (BoQ item no. 16) as certified by SMPK appointed Third Party Inspecting Agency and/or Consultant as applicable |
| 8. | 8% | Commissioning of the Bascule bridge with all electrical, mechanical and structural rehabilitation work completed as per Scope of work as certified by SMPK appointed Third Party Inspecting Agency and/or Consultant as applicable |
| 9. | 15% | After final taking over of the Bascule Bridge with all accessories on completion of successful commissioning and acceptance by SMPK as per Clause no. 7 of Special conditions of contract. |

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| 10. | 1% | On successful completion of 1 st year of warranty |
| 11. | 1% | On successful completion of 2 nd year of warranty |
| 12. | 1% | On successful completion of 3 rd year of warranty |
| 13. | 1% | On successful completion of 4 th year of warranty |
| 14. | 1% | On successful completion of 5 th year of warranty |

Note: GST as applicable will be paid against each invoice subject to Clause No. 11, 12 of Annexure-B. All other taxes, duties, levies as applicable in India would also be paid extra at actual.

Sl.No.25: The following amendments have also been done consequent to SMPK's above clarifications/decisions:

| Sl.No. | Page No. of Tender document | Clause no./Para No./Reference | Original terms and conditions | Revised terms and conditions |
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| a) | 118 | Bill of Quantities (BoQ) at Annexure-E | | At Annexure-E i.e. Bill of Quantities, the word "GST" wherever appearing shall be replaced by " taxes, duties and levies as applicable in India". |
| b) | 109 | Para no. 2 under Clause no. 3 of Annexure-D Caption: ' Onsite Warranty Period ' | During the warranty period, the Contractor shall also deploy one technical team consisting of one mechanical fitter one electrical fitter and one supervisor, at site during the operation period of the bridge, conversant with the entire operating system, to attend instantly to any malfunction/breakdown of the system during operation of the bridge. The bridge is expected to be operated only once in a day during this time spanning maximum 3 hours. The above malfunction/breakdown should be attended by the | During the warranty period, the Contractor shall also deploy one technical team consisting of one mechanical fitter one electrical fitter and one supervisor, at site during the operation period of the bridge, conversant with the entire operating system, to attend instantly to any malfunction/breakdown of the system during operation of the bridge. The bridge is expected to be operated only once in a day during this time spanning maximum 3 hours. The above malfunction/breakdown should be attended by the |

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| | | | <p>onsite team and restored within a period of maximum ½ hour time. In case of default by the Contractor in deployment of the full team, proportionate deduction will be made from the payable amount of yearly 2% as stipulated in Payment Terms, and further penalty of same amount will also be deducted . In the event of failure of the Contractor in attending breakdown and consequent out of commissioning of the bridge beyond ½ hour time, the warranty period of 5 years would be extended for the equivalent period for which the bridge remained out of commissioned due to the Contractors said inability to attend the breakdown and rectify the same. For the purpose of extension of Warranty period , the aggregate breakdowns in a year will be calculated and any fraction of a day will be rounded off to one day. The Contractor shall provide letters to the suppliers with copies to the SMPK, identifying the scheduled date of Final Acceptance and subsequent handing over of the same to SMPK of the bridge and, therefore, the date the warranty period shall begin. If the date of Final Acceptance and subsequent handing over to SMPK as mentioned hereinbefore is extended or if beyond the normal warranty, it shall be the Contractor's responsibility to extend the commencement of the warranties from the suppliers at no cost to SMPK. The Contractor shall assign to SMPK, all manufacturer's warranties or guarantees on all such equipment, material or products furnished for, or installed as, part of the work.</p> | <p>onsite team and restored within a period of maximum ½ hour time. In case of default by the Contractor in deployment of the full team, proportionate deduction will be made from the payable amount of yearly 1% as stipulated in Payment Terms, and further penalty of same amount will also be deducted . <i>In the event of failure of the Contractor in attending breakdown and consequent out of commissioning of the bridge beyond ½ hour time, the warranty period of 5 years would be extended for the equivalent period for which the bridge remained out of commissioned due to the Contractors said inability to attend the breakdown and rectify the same.</i> For the purpose of extension of Warranty period , the aggregate breakdowns in a year will be calculated and any fraction of a day will be rounded off to one day. The Contractor shall provide letters to the suppliers with copies to the SMPK, identifying the scheduled date of Final Acceptance and subsequent handing over of the same to SMPK of the bridge and, therefore, the date the warranty period shall begin. If the date of Final Acceptance and subsequent handing over to SMPK as mentioned hereinbefore is extended, it shall be the Contractor's responsibility to extend the commencement of the warranties from the suppliers at no cost to SMPK. The Contractor shall assign to SMPK, all manufacturer's warranties or guarantees on all such equipment, material or products furnished for, or installed as, part of the work.</p> |
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All other terms and conditions of the Tender Document shall remain unaltered.

The above decision/clarifications/amendments shall be issued as Addendum and shall be a part of the Tender Document as per terms of the original tender and the same shall have to be submitted duly stamped and signed by the tenderer along with the techno-commercial part of the tender.

Dated: 09.11.2022

Chief Mechanical Engineer