


Kerala

Tenders

eTendering System Government of Kerala



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| Organisation Chain : | Kerala State Road Transport Corporation Stores and Purchase |
| Tender ID : | 2025_KSRTC_724753_1 |
| Tender Ref No : | KS-GL01/114/2024 |
| Tender Title : | Fully Built AC Seater 10.5 Mtr 4-Cylinder Diesel Propelled Premium Superfast Buses |
| Corrigendum Type : | Technical Bid |

Corrigendum Document Details

| Corr.No. | Corrigendum Title | Corrigendum Description | Published Date | Document Name | Doc Size(in KB) |
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KSRTC - SWIFT LTD

(A Government of Kerala Undertaking)

Anayara, Thiruvananthapuram, Kerala.

Telephone No: 0471-2465000, E-mail: gm.ksrtcswift@gmail.com

No. KS-GL01/114/2024-GL-K-SWIFT

Date: 05.02.2025

CORRIGENDUM / ADDENDUM – 2

Sub: e-Tender for the Supply of Fully Built AC Seater 10.5 Mtr 4-Cylinder Diesel Propelled Premium Super Fast Buses of BSVI Norms or Latest as per CMVR Norms - Amendment of NIT

Ref: 1. NIT No. KS-GL01/114/2024-GL-K-SWIFT dated: 03.01.2025
2. Tender ID: 2025_KSRTC_724753_1
3. Corrigendum / Addendum –I dtd: 04.02.2025

The modified **Appendix – I (Modified)** and Modified **Annexure – E (Modified)** shall be uploaded in the e-Tender portal after duly filled and signed.

Tender Inviting Authority

Appendix – I (Modified)

Specifications of Fully Built AC Seater 10.5 Mtr 4-Cylinder Diesel Propelled Premium Super Fast Buses of BSVI Norms or Latest as per CMVR Norms

| Sl No. | CHARACTERISTICS | | SPECIFICATION DETAILS |
|---------------|-------------------------------------------------------|-------|----------------------------------------------------------------------------------------------------------|
| 1. | Propulsion System | | High Speed Diesel 4-Cylinder BS6 Engine |
| 2. | Overall length | | 10 - 11 mtr (Maximum) |
| 3. | Floor height | | Minimum 900mm +/-50 mm, approval as per AIS 052 with sufficient luggage space beneath the platform |
| 4. | Angle of approach (unladen) | | As per AIS:052 |
| 5. | Angle of departure (unladen) | | As per AIS:052 |
| 6. | Ramp over angle (half of break-over angle) | | As per AIS:052 |
| 7. | Overall width | | 2600 mm Max |
| 8. | Front over hang | | As per CMVR |
| 9. | Rear over hang | | As per CMVR |
| 10. | Wheel base | | As per CMVR |
| 11. | No. of axles | | Two |
| 12. | Emission Norm | | Should comply the latest BSVI norms. |
| 13. | Transmission | | Manual |
| 14. | Brake System | | Full air Dual line with ABS or advanced version |
| 15. | Steering | | Hydraulic power Steering |
| 16. | Steering wheel height adjustment and angle adjustment | | With height and angle adjustment provision desirable. Adjustable steering column desirable. |
| 17. | Engine | | Position at Front, Minimum 145 HP |
| 18. | Suspension | Front | Weveller / Parabolic Spring |
| | | Rear | Weveller / Parabolic Spring |
| 19. | Fuel Tank | | Minimum 160 Litres |
| 20. | Warranty | | The Fully Built AC Seater 10.5 Mtr 4-Cylinder Diesel Propelled Premium Superfast Bus conforming to BS VI |

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| | | norms or latest as per CMVR Norms offered should have a warranty period of 3 Years / 400000 km which ever is earlier from the date of registration. |
| 21. | Battery | Low maintenance type lead acid batteries for 24V system – (performance as per BIS:14257-1995 (latest)) Two 12V batteries of suitable capacity as per OEM design and Type Approval. Maintenance free batteries with minimum one year warranty as per battery manufacturer. |
| 22. | Battery box | As per AIS 052 |
| 23. | Electric Horn | 24 V as per IS.1884:1993 Matched Pair (Low & Hightone) As per CMVR Type approval |
| 24. | Public Addressing System with USB type speakers | CMVR approved PA system shall be provided with USB type amplifier. Speakers of good quality shall be mounted in the interior roof audible to the passengers. The PA system shall be connected with TV also. |
| 25. | Speed limiting device | Required as per type of Engine. There shall be provisions for limiting the vehicle speed at any value as per relevant KMVR and as required by KSRTC SWIFT Ltd. One Scan tool should be provided to KSRTC SWIFT for 10 buses. Scan tool to be provided for other fault diagnosis |
| 26. | Dash Board Camera with wi-fi for real time monitoring and storage facility | Suitable camera shall be provided in the front, to have full front road view from the dash board side. Dash board camera with wifi for real time monitoring and storage facility for minimum 15 days to be provided with all accessories, supporting softwares and monitors as required. |

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| | | <ul style="list-style-type: none"> a. To Front view b. To interior view c. To view driver d. Reverse Camera e. Left side view camera f. AI Camera, Driver fatigue detection alert camera with online monitoring and alert. |
| 27. | Destination Board | <p>3 Nos. of Destination Boards to be provided with single control.</p> <p>Full length Front Destination Board –2 lines display with single color (<i>Amber colour</i>) should be fitted close to the front wind shield glass in such a way that reflection from the LED board should not distract the driver.</p> <p>2 LED board in two lines at Rear side and left side.</p> <p>(Data transfer – through USB)</p> |
| 28. | GPS and Panic button | <p>In-built IRNSS based VLT Device for Automatic Vehicle Location System which is approved by Kerala Motor vehicle Department (with compliance of AIS 140 with minimum 5 Nos. of emergency buttons for access to every passenger in the bus , preferably inbuilt box). This VLT Device shall be integrated with other VLT System implemented by KSRTC/ KSRTC SWIFT and shall also provide suitable software or to share the API for Vehicle Tracking, Input to PIS System, Kmpl and other performance reports</p> <p>No additional payment will be made by KSRTC –SWIFT for activation and subscription for mandatory 2 years as per AIS 140.</p> |
| 29. | Entertainment System | <p>Minimum 1 units TV, Minimum 32/24" good quality LCD TV wi-fi enabled with rugged fittings and also the Public Information System shall be displayed and compact with the software</p> |

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| | | platform of KSRTC/ KSRTC SWIFT, DVD player, Speakers, Power Inverter, Public addressing System. If 32" TV can't be accommodated as per bus body design, 24 inch TV can be considered. |
| 30. | Lights | As per CMVR / AIS |
| 31. | Safety and Emergency door | The bus body design shall be of Type II and hence applicable requirements as per stipulations need to be included. |
| 32. | No. of passenger door | No. of passenger door - 1 No. positioned ahead of the front axle / behind of the front axle between the wheelbase. |
| 33. | Reading Lights & AC Vents | Shall be provided with individual control for each seats |
| 34. | A/C | A/C system as approved as per AIS 052 shall be provided. The A/C manufacturer should have sufficient service support within Kerala and the nearby states. |
| 35. | Night light | Night Light will be through the hatrack. |
| 36. | Roof Hatch | Roof hatch 2 Nos. shall be provided in saloon area. |
| 37. | Tyres | Minimum 235/75R17.5, 14PR Or Suitable Tyre Size as per standards. Tubeless Radial Tyres – 6 +1 (Spare wheel & carrier. |
| 38. | Spare wheel carrier | Winch type/ Chain type/Center Mounted Type spare wheel carrier as per OEM design |
| 39. | Fire Extinguisher | Should be provided as per CMVR/ KMVR rules |
| 40. | Accessories | 2-set-of side curtains, Floor Mats, 2 set of head rest covers, Fully equipped tool kit containing Tommy bar, Wheel spanner, Screw driver (Heavy duty), cutting pliers, pipe wrench and Hydraulic Bottle Jack |

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| | | (Capacity 10 Ton-1 No.). Separate bottle holder for driver seat. Front Wind Shield Glass-1 No. each for every 10 buses. Side and emergency glass-1 set each for every 10 buses |
| 41. | Paint and Graphics | Colour Scheme, Logo / Graphics to be painted will be intimated to the successful bidder. |
| 42. | ETM Box | ETM Box of suitable size with lock and key facility for keeping ETM |
| 43. | Mobile Charging unit | One each (with two charging ports – Two USB / one USB & one C port) in each seat row on both sides, which should be concealed and tamper proof. |
| 44. | Floor material | Minimum 12mm BWR Plywood having density of minimum 1.1 gm/cm ³ and 3mm vinyl shall be used as per AIS : 052 |
| 45. | OBD | The details to be made available at KSRTC/ KSRTC SWIFT control room |
| 46. | Wifi | Wifi access to the passengers to be given. Wifi router to be provided by the vehicle manufacturer. |
| 47. | ITS | Not applicable |
| 48. | Operating mechanism of passenger door by driver | Power controlled as per AIS 052 |
| 49. | Positions of door controls | Should be on dashboard for driver control and emergency switch inside & outside of doors as per AIS 052 |
| 50. | Minimum clear door width excluding grab handle in fully opened position | As per AIS 052 |
| 51. | Maximum first step height | As per AIS 052 |
| 52. | Power operated service door- construction & control system of a power operated service door to be such that a passenger is unlikely to be injured/ trapped between the | As per AIS 052 |

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| | doors | |
| 53. | Door components | As per AIS 052 |
| 54. | Door locks/locking systems/door retention items | As per AIS 052 |
| 55. | Door hinges | As per AIS 052, GI preferred |
| 56. | Design type approval | As per AIS 052 |
| 57. | Bus structure- materials specs etc. | GI/Anti corrosion treated ERWCR Steel Materials as per Type approval |
| 58. | Grab rails, Centre posts and passenger slings | <p>Stainless steel pipe Gr.304 or equivalent of 32mm & 2mm thick for Grab rail, Centre post and should provide sufficient passenger slings at necessary points.</p> <p>Each passenger sling should have advertisement space.</p> |
| 59. | Foot step | Foot step shall be provided as per AIS-052. |
| 60. | Panel beading | |
| 61. | Roof grab rail brackets | |
| 62. | Side Glass | Sliding Glass as per AIS052/CMVR. |
| 63. | Glass specifications | Toughened tinted glass IS 2553 (part-2)-1992/latest |
| | Glass thickness: | As per AIS 052 |
| | Colour of glass | Tinted Glass As per CMVR |
| 64. | Rear view mirrors | As per AIS 052 |
| 65. | Fitment of Rear view mirror | Stainless steel / MS powder coated/ Aluminum Casted – brackets as per OEM design, Left side rear view mirror should visible to driver through Front Wind Screen glass |
| 66. | Passenger Seating Capacity | 35 High Back Rest Reclining seats + 5 High Back Rest seats in last row can be provided (last row seats non-reclining shall be provided, if semi-reclining not possible in the last row as per OEM design). Minimum 40 Nos. semi-reclinable seats, 2X2 layout with foot step. |

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| 67. | (Seats sample: 2 sets of seater which is offered to be fitted in the bus should be given as sample to KSRTC SWIFT, Anayara, Thiruvananthapuram before fitment for assessing the suitability). | As per AIS-023, seat lay out 2 X 2 Every seat must have its suitable advertisement space with open able acrylic cover / Shall have suitable advertisement space. |
| 68. | Dash board lighting/control lighting | As per AIS 052 |
| 69. | Seat area /seat space per passenger (width* depth) | As per AIS 052 |
| 70. | Seat pitch-minimum | As per AIS 052 |
| 71. | Torso angle (degrees) | As per AIS 052 |
| 72. | Passenger seating | As per AIS 052 & AIS 023. Preferably Fabric and the colour shall be intimated later. |
| 73. | Seat materials | As per AIS 052 & AIS 023 |
| 74. | Seat arm (Arm rest) | Required for all seats |
| 75. | Sun visor | Required |
| 76. | Seat belts & their anchorage | As per AIS 052. Should be provided to all seats. |
| 77. | Driver seat belt & anchorage duly type approved. | 4 way adjustable driving seat with high back rest & Head Rest as per CMVR & AIS 052 conforming to AIS 005 & 015 |
| 78. | Driver's working space | As per AIS 052. |
| 79. | Bottle Holder | A bottle holder of minimum 1 Ltr size should be provided on the driver door in such a way that it is easily accessible. |
| 80. | Heat resistance | Bonnet of the engine compartment should be PUF insulated and noise free as per CMVR / Industry standards. The front grill shall be of suitable design to provide air circulation to engine . |
| 81. | Corrosion prevention treatment | As per clause 3.17 of AIS 052 |
| 82. | Internal surfaces of structural members | |
| 83. | External surfaces of structural members | |

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| 84. | After drilling holes/welding | |
| 85. | Primer coating | As per clause 3.17 of AIS 052 |
| 86. | Body Painting: | PU Paint to be used |
| 87. | Body Colour and Design | Will be given by KSRTC SWIFT Ltd. |
| 88. | Electrical system, electrical cables and conductor cross section | BIS marked, copper conductors with fire retardant insulation as per IS/ISO: 6722:2006. Conductor cross-section varying as per circuit requirements, minimum cross-section 0.5 sq mm. |
| 89. | Fuse | As per AIS 052 |
| 90. | Isolation switches for electrical circuits where RMS value of voltage exceeds 100 volts | |
| 91. | Location of cables away from heat sources | |
| 92. | Type approval of circuit diagram as per standards related to electric equipment/wiring | |
| 93. | Battery cut – off switch (isolator switch): | Shall be positioned near driver seat for easy and quick operation by driver. |
| 94. | Wind screen wiper: | As per table 22 of AIS 007 |
| 95. | Wiper motor: | Variable speed with time delay relay as per AIS 11 |
| 96. | Wiper arm/blade: | As per AIS 019/AIS 011 |
| 97. | Power ports | Requires one ETM charging point with ETM holder in driver cabin. DC to AC converter should be provided. The capacity of DC to AC converter shall be informed at the time of proto inspection. |
| 98. | Lighting- internal & external and illumination | As per AIS 052 and all interior lights should be LED Type, OE fitting preferred in case of head lamp and tail lamp. |
| 99. | First aid box: | 1 number fixed metallic / PP make First Aid Box with required items. |
| 100. | Handholds: | As per AIS 052, fixed type preferred. |
| 101. | Stanchions: | As per AIS 052. Stainless steel 38 x 2mm All stanchion brackets should be |

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| | | of metallic type. |
| 102. | Entrance/exit guard/step well guard: | As per AIS 052, step well guards made of stainless steel pipe of 25mm x 2mm. No seats shall be fitted obstructing the free access to emergency door. One grab rail above the emergency door is required. Foot rest come guard to be provided in front of seats behind emergency door. |
| 103. | Front/rear door, step well lights, door open sign | LED bulb as per AIS 008 |
| 104. | Mirrors right/left side exterior /interior: | Convex as per AIS 001 & 002. interior with double curvature |
| 105. | Towing device front/rear | As per CMVR & IS 9760-ring type Towing Hook / pin |
| 106. | Warning triangle | As per AIS 052/CMVR |
| 107. | Bumpers-front and rear | As per AIS 052, Detachable type, easily removable in order to support the engine. Construction of bumper should be in such a way that it can be easily removable to access the units for repair & maintenance and for towing of bus, if required. If the design type approval is FRP bumpers integrated with Front and Rear fascia will be provided with tow hook arrangement, this can be accepted. Support shall be provided for repair and maintenance of bumper. |
| 108. | Luggage Box / Courier Box | As per AIS 052 and mutually agreed by the purchaser and bidder with scope for maximum space for the provision of courier supply. |
| 109. | Inside luggage carrier | As per AIS 052 |
| 110. | Stay box for crew | Stay Box of sufficient size for crew to be provided with locking facility Accessible from driver cabin |
| 111. | Driver Cabin Separation | Should be separated from passenger saloon as per AIS 052 Stainless steel |

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| | | <p>tube structure, fencing type this separation should not restrict the driver seat position adjustments and a suitable fan may be provided.</p> <p>Bonnet of the engine compartment should be PUF insulated and noise free as per CMVR / Industry standards.</p> |
| 112. | Proper access to repair and maintenance points of various vehicle components | There shall be easy and quick access to all under chassis components which require repair and maintenance such as suspension, P-hafts, Air filters, Gear box, Air drier, DB Valve, Power steering units Radiator etc. |
| 113. | Paneling Materials | <ol style="list-style-type: none"> 1. Out side Roof : Aluminium Coil Sheet (minimum 0.9mm) Bitumin tape should be used at all joint areas to arrest water leakages) 2. Inside roof: Suitable heat resistant material to avoid heat transfer to the passenger saloon area. Fire retardant insulation material shall be used in between the roof inside and outside panels. 3. Inside below window sill: Aluminium Beading with PVC sleeve. 4. Window sill flaps : ABS sill flaps. 5. Inside window pillar flaps: PP/ABS window pillars. 6. Front and Rear face paneling : FRP 7. All remaining paneling : Aluminium / GI Sheets |
| 114. | Conductor bell | Iron – Nickel plated type with mounting bracket and lever.with good quality string. |

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| 115. | Safety bracket for propeller shaft | As per KMVR |
| 116. | Safety bracket for diesel Tank | Required (Fully covered Grill type) |
| 117. | Positioning of switches | All light control switches shall be positioned on the top of the driver seat / on the dash board. |
| 118. | Front grill opening | Front grill opening. The flip grill to have sturdy support in opened condition as per OEM design, for Proper cooling of engine |
| 119. | Gear box inspection cover | Preferably 75x50mm size inspection cover shall be provided or suitable size as per OEM design |
| 120. | Vehicle location tracking device and emergency button | Complying AIS 140 and as approved by KMVD with IRNSS, models with minimum 5 panic buttons necessary software shall also be supplied for Vehicle Tracking, KMPL monitoring, PIS and other performance reports and must be integrated with KSRTC / KSRTC SWIFT applications. No additional payment will be made by KSRTC –SWIFT. No other changes in the clause. |
| 121. | Certifications | Comply with a) CMVR and KMVR requirements b) Type approval certificate by any authorized agency in CMVR 126 c) Compliance to strength of super structure- AIS 031 d) Compliance to Bus Body Code AIS 052 & ITS AIS:140 e) Compliance of flammability requirements as per IS 15061:2002 f) Certificate issued by ARAI g) The Gross Vehicle Weight shall be as per the Vehicle Manufacturer design to meet the specifications as per the NIT. |
| 122. | Stage inspection of prototype bus by KSRTC / KSRTC SWIFT team at the production site | 1. After the completion of super structure (before paneling and fixing of platform) |

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| | | 1.After completion of whole work. The supplier should make arrangements for the inspection timely. |
| 123. | Electronic Stability Control | Electronic Stability Control (ESC) to be included in the buses. |
| 124. | Dustbin | One good quality dustbin of suitable size shall be provided in the saloon area in a convenient location. |
| 125. | Minimum GVW | As per CMVR to meet the specifications as per the NIT. |
| 126. | Electronic Stability Control (ESC)- Not Mentioned in the Specification | Electronic Stability Control (ESC) to be included in the buses. |
| 127. | FDSS / FDAS: FDSS / FDAS shall be provided as per CMVR / KMVR as required at the time of registration of vehicle. | Shall comply as per CMVR/KMVR. |

Signature:

Name & Address of the Tenderer Place:

Date:

(Seal of the Tenderer)

ANNEXURE – E (Modified)

(Proforma of Certificate be furnished along with Technical Bid)

Specifications Of Fully Built AC Seater 10.5 Mtr 4-Cylinder Diesel Propelled Premium Superfast Bus conforming to BS VI norms or latest as per CMVR NORMS

| SI No. | CHARACTERISTICS | | SPECIFICATION DETAILS | Compliance Status Y/N | Remarks, if any |
|--------|-------------------------------------------------------|-------|-----------------------------------------------------------------------------------------------------|-----------------------|-----------------|
| 1. | Propulsion System | | High Speed Diesel 4-Cylinder BS6 Engine | | |
| 2. | Overall length | | 10 - 11 mtr (Maximum) | | |
| 3. | Floor height | | Minimum 900mm +/- 50 mm, approval as per AIS 052 with sufficient luggage space beneath the platform | | |
| 4. | Angle of approach (unladen) | | As per AIS:052 | | |
| 5. | Angle of departure (unladen) | | As per AIS:052 | | |
| 6. | Ramp over angle (half of break-over angle) | | As per AIS:052 | | |
| 7. | Overall width | | 2600 mm Max | | |
| 8. | Front over hang | | As per CMVR | | |
| 9. | Rear over hang | | As per CMVR | | |
| 10. | Wheel base | | As per CMVR | | |
| 11. | No. of axles | | Two | | |
| 12. | Emission Norm | | Should comply the latest BSVI norms. | | |
| 13. | Transmission | | Manual | | |
| 14. | Brake System | | Full air Dual line with ABS or advanced version | | |
| 15. | Steering | | Hydraulic power Steering | | |
| 16. | Steering wheel height adjustment and angle adjustment | | With height and angle adjustment provision desirable. Adjustable steering column desirable. | | |
| 17. | Engine | | Position at Front, Minimum 145 HP | | |
| 18. | Suspension | Front | Weveller / Parabolic Spring | | |
| | | Rear | Weveller / Parabolic Spring | | |
| 19. | Fuel Tank | | Minimum 160 Litres | | |
| 20. | Warranty | | The Fully Built AC Seater 10.5 Mtr 4- | | |

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| | | Cylinder Diesel Propelled Premium Superfast Bus conforming to BS VI norms or latest as per CMVR Norms offered should have a warranty period of 3 Years / 400000 km which ever is earlier from the date of registration. | | |
| 21. | Battery | Low maintenance type lead acid batteries for 24V system – (performance as per BIS:14257-1995 (latest)) Two 12V batteries of suitable capacity as per OEM design and Type Approval. Maintenance free batteries with minimum one year warranty as per battery manufacturer. | | |
| 22. | Battery box | As per AIS 052 | | |
| 23. | Electric Horn | 24 V as per IS.1884:1993 Matched Pair (Low & Hightone) As per CMVR Type approval | | |
| 24. | Public Addressing System with USB type speakers | CMVR approved PA system shall be provided with USB type amplifier. Speakers of good quality shall be mounted in the interior roof audible to the passengers.The PA system shall be connected with TV also. | | |
| 25. | Speed limiting device | Required as per type of Engine. There shall be provisions for limiting the vehicle speed at any value as per relevant KMVR and as required by KSRTC SWIFT Ltd. One Scan tool should be provided to KSRTC SWIFT for 10 buses. Scan tool to be provided for other fault diagnosis | | |
| 26. | Dash Board Camera with wi-fi for real | Suitable camera shall be provided in the | | |

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| | time monitoring and storage facility | <p>front, to have full front road view from the dash board side.</p> <p>Dash Board camera with wifi for real time monitoring and storage facility for minimum 15 days to be provided with all accessories, supporting softwares and monitors as required.</p> <ol style="list-style-type: none"> To Front view To interior view To view driver Reverse Camera Left side view camera AI Camera, Driver fatigue detection alert camera with online monitoring and alert. | | |
| 27. | Destination Board | <p>3 Nos. of Destination Boards to be provided with single control. Full length Front Destination Board –2 lines display with single color (<i>Amber colour</i>) should be fitted close to the front wind shield glass in such a way that reflection from the LED board should not distract the driver.</p> <p>2 LED board in two lines at Rear side and left side.</p> <p>(Data transfer – through USB)</p> | | |
| 28. | GPS and Panic button | <p>In-built IRNSS based VLT Device for Automatic Vehicle Location System which is approved by Kerala Motor vehicle Department (with compliance of AIS 140 with minimum 5 Nos. of emergency buttons for access to every passenger in the bus , preferably inbuilt box). This VLT Device shall be integrated with other VLT System implemented by KSRTC/ KSRTC SWIFT</p> | | |

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| | | and shall also provide suitable software or to share the API for Vehicle Tracking, Input to PIS System, Kmpl and other performance reports No additional payment will be made by KSRTC –SWIFT for activation and subscription for mandatory 2 years as per AIS 140. | | |
| 29. | Entertainment System | Minimum 1 units TV, Minimum 32/24" good quality LCD TV wi-fi enabled with rugged fittings and also the Public Information System shall be displayed and compact with the software platform of KSRTC/ KSRTC SWIFT, DVD player, Speakers, Power Inverter, Public addressing System. If 32" TV can't be accommodated as per bus body design, 24 inch TV can be considered. | | |
| 30. | Lights | As per CMVR / AIS | | |
| 31. | Safety and Emergency door | The bus body design shall be of Type II and hence applicable requirements as per stipulations need to be included. | | |
| 32. | No. of passenger door | No. of passenger door - 1 No. positioned ahead of the front axle / behind of the front axle between the wheelbase. | | |
| 33. | Reading Lights & AC Vents | Shall be provided with individual control for each seats | | |
| 34. | A/C | A/C system as approved as per AIS 052 shall be provided. The A/C manufacturer should have sufficient service support within Kerala and the nearby states. | | |
| 35. | Night light | Night Light will be through the hatrack. | | |
| 36. | Roof Hatch | Roof hatch 2 Nos. shall be provided in saloon area. | | |

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| 37. | Tyres | Minimum 235/75R17.5, 14PR Or Suitable Tyre Size as per standards. Tubeless Radial Tyres – 6 +1 (Spare wheel & carrier). | | |
| 38. | Spare wheel carrier | Winch type/ Chain type/Center Mounted Type spare wheel carrier as per OEM design | | |
| 39. | Fire Extinguisher | Should be provided as per CMVR/ KMVR rules | | |
| 40. | Accessories | 2-set-of side curtains, Floor Mats, 2 set of head rest covers, Fully equipped tool kit containing Tommy bar, Wheel spanner, Screw driver (Heavy duty), cutting pliers, pipe wrench and Hydraulic Bottle Jack (Capacity10Ton-1No.).Separate bottle holder for driver seat. Front Wind Shield Glass–1No. each for every 10 buses. Side and emergency glass–1set each for every 10 buses | | |
| 41. | Paint and Graphics | Colour Scheme, Logo / Graphics to be painted will be intimated to the successful bidder. | | |
| 42. | ETM Box | ETM Box of suitable size with lock and key facility for keeping ETM | | |
| 43. | Mobile Charging unit | One each (with two charging ports – Two USB / one USB & one C port) in each seat row on both sides, which should be concealed and tamper proof. | | |
| 44. | Floor material | Minimum 12mm BWR Plywood having density of minimum 1.1 gm/cm ³ and 3mm vinyl shall be used as per AIS : 052 | | |
| 45. | OBD | The details to be made available at KSRTC/ KSRTC SWIFT control room | | |
| 46. | Wifi | Wifi access to the passengers to be given. Wifi router to be provided by the vehicle manufacturer. | | |

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| 47. | ITS | Not applicable | | |
| 48. | Operating mechanism of passenger door by driver | Power controlled as per AIS 052 | | |
| 49. | Positions of door controls | Should be on dashboard for driver control and emergency switch inside & outside of doors as per AIS 052 | | |
| 50. | Minimum clear door width excluding grab handle in fully opened position | As per AIS 052 | | |
| 51. | Maximum first step height | As per AIS 052 | | |
| 52. | Power operated service door-construction & control system of a power operated service door to be such that a passenger is unlikely to be injured/ trapped between the doors | As per AIS 052 | | |
| 53. | Door components | As per AIS 052 | | |
| 54. | Door locks/locking systems/door retention items | As per AIS 052 | | |
| 55. | Door hinges | As per AIS 052, GI preferred | | |
| 56. | Design type approval | As per AIS 052 | | |
| 57. | Bus structure-materials specs etc. | GI/Anti corrosion treated ERWCR Steel Materials as per Type approval | | |
| 58. | Grab rails, Centre posts and passenger slings | Stainless steel pipe Gr.304 or equivalent of 32mm & 2mm thick for Grab rail, Centre post and should provide sufficient passenger slings at necessary points. Each passenger sling should have advertisement space. | | |
| 59. | Foot step | Foot step shall be provided as per AIS-052. | | |
| 60. | Panel beading | | | |
| 61. | Roof grab rail brackets | | | |
| 62. | Side Glass | Sliding Glass as per AIS052/CMVR. | | |
| 63. | Glass specifications | Toughened tinted glass | | |

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| | | IS 2553 (part-2)-1992/latest | | |
| | Glass thickness: | As per AIS 052 | | |
| | Colour of glass | Tinted Glass As per CMVR | | |
| 64. | Rear view mirrors | As per AIS 052 | | |
| 65. | Fitment of Rear view mirror | Stainless steel / MS powder coated/ Aluminum Casted – brackets as per OEM design, Left side rear view mirror should be visible to driver through Front Wind Screen glass | | |
| 66. | Passenger Seating Capacity | 35 High Back Rest Reclining seats + 5 High Back Rest seats in last row can be provided (last row seats non-reclining shall be provided, if semi-reclining not possible in the last row as per OEM design). Minimum 40 Nos. semi-reclinable seats, 2X2 layout with foot step. | | |
| 67. | (Seats sample: 2 sets of seater which is offered to be fitted in the bus should be given as sample to KSRTC SWIFT, Anayara, Thiruvananthapuram before fitment for assessing the suitability). | As per AIS-023, seat layout 2 X 2 Every seat must have its suitable advertisement space with open acrylic cover / Shall have suitable advertisement space. | | |
| 68. | Dash board lighting/control lighting | As per AIS 052 | | |
| 69. | Seat area /seat space per passenger (width* depth) | As per AIS 052 | | |
| 70. | Seat pitch-minimum | As per AIS 052 | | |
| 71. | Torso angle (degrees) | As per AIS 052 | | |
| 72. | Passenger seating | As per AIS 052 & AIS 023. Preferably Fabric and the colour shall be intimated later. | | |
| 73. | Seat materials | As per AIS 052 & AIS 023 | | |
| 74. | Seat arm (Arm rest) | Required for all seats | | |
| 75. | Sun visor | Required | | |

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| 76. | Seat belts & their anchorage | As per AIS 052. Should be provided to all seats. | | |
| 77. | Driver seat belt & anchorage duly type approved. | 4 way adjustable driving seat with high back rest & Head Rest as per CMVR & AIS 052 conforming to AIS 005 & 015 | | |
| 78. | Driver's working space | As per AIS 052. | | |
| 79. | Bottle Holder | A bottle holder of minimum 1 Ltr size should be provided on the driver door in such a way that it is easily accessible. | | |
| 80. | Heat resistance | Bonnet of the engine compartment should be PUF insulated and noise free as per CMVR / Industry standards. The front grill shall be of suitable design to provide air circulation to engine . | | |
| 81. | Corrosion prevention treatment | As per clause 3.17 of AIS 052 | | |
| 82. | Internal surfaces of structural members | | | |
| 83. | External surfaces of structural members | | | |
| 84. | After drilling holes/welding | | | |
| 85. | Primer coating | As per clause 3.17 of AIS 052 | | |
| 86. | Body Painting: | PU Paint to be used | | |
| 87. | Body Colour and Design | Will be given by KSRTC SWIFT Ltd. | | |
| 88. | Electrical system, electrical cables and conductor cross section | BIS marked, copper conductors with fire retardant insulation as per IS/ISO: 6722:2006. Conductor cross-section varying as per circuit requirements, minimum cross-section 0.5 sq mm. | | |
| 89. | Fuse | As per AIS 052 | | |
| 90. | Isolation switches for electrical circuits where RMS value of voltage exceeds 100 volts | | | |
| 91. | Location of cables away from heat sources | | | |
| 92. | Type approval of | | | |

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| | circuit diagram as per standards related to electric equipment/wiring | | | |
| 93. | Battery cut – off switch (isolator switch): | Shall be positioned near driver seat for easy and quick operation by driver. | | |
| 94. | Wind screen wiper: | As per table 22 of AIS 007 | | |
| 95. | Wiper motor: | Variable speed with time delay relay as per AIS 11 | | |
| 96. | Wiper arm/blade: | As per AIS 019/AIS 011 | | |
| 97. | Power ports | Requires one ETM charging point with ETM holder in driver cabin. DC to AC converter should be provided. The capacity of DC to AC converter shall be informed at the time of proto inspection. | | |
| 98. | Lighting- internal & external and illumination | As per AIS 052 and all interior lights should be LED Type, OE fitting preferred in case of head lamp and tail lamp. | | |
| 99. | First aid box: | 1 number fixed metallic / PP make First Aid Box with required items. | | |
| 100. | Handholds: | As per AIS 052, fixed type preferred. | | |
| 101. | Stanchions: | As per AIS 052. Stainless steel 38 x 2mm All stanchion brackets should be of metallic type. | | |
| 102. | Entrance/exit guard/step well guard: | As per AIS 052, step well guards made of stainless steel pipe of 25mm x 2mm. No seats shall be fitted obstructing the free access to emergency door. One grab rail above the emergency door is required. Foot rest come guard to be provided in front of seats behind emergency door. | | |
| 103. | Front/rear door, step well lights, door open sign | LED bulb as per AIS 008 | | |
| 104. | Mirrors right/left side exterior /interior: | Convex as per AIS 001 & 002. interior with | | |

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| | | double curvature | | |
| 105. | Towing device front/rear | As per CMVR & IS 9760-ring type Towing Hook / pin | | |
| 106. | Warning triangle | As per AIS 052/CMVR | | |
| 107. | Bumpers-front and rear | As per AIS 052, Detachable type, easily removable in order to support the engine. Construction of bumper should be in such a way that it can be easily removable to access the units for repair & maintenance and for towing of bus, if required. If the design type approval is FRP bumpers integrated with Front and Rear fascia will be provided with tow hook arrangement, this can be accepted. Support shall be provided for repair and maintenance of bumper. | | |
| 108. | Luggage Box / Courier Box | As per AIS 052 and mutually agreed by the purchaser and bidder with scope for maximum space for the provision of courier supply. | | |
| 109. | Inside luggage carrier | As per AIS 052 | | |
| 110. | Stay box for crew | Stay Box of sufficient size for crew to be provided with locking facility Accessible from driver cabin | | |
| 111. | Driver Cabin Separation | Should be separated from passenger saloon as per AIS 052 Stainless steel tube structure, fencing type this separation should not restrict the driver seat position adjustments and a suitable fan may be provided. Bonnet of the engine compartment should be PUF insulated and noise free as per CMVR / Industry standards. | | |
| 112. | Proper access to | There shall be easy | | |

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| | repair and maintenance points of various vehicle components | and quick access to all under chassis components which require repair and maintenance such as suspension, P-hafts, Air filters, Gear box, Air drier, DB Valve, Power steering units Radiator etc. | | |
| 113. | Paneling Materials | <ol style="list-style-type: none"> 1. Out side Roof : Aluminium Coil Sheet (minimum 0.9mm) Bitumin tape should be used at all joint areas to arrest water leakages) 2. Inside roof: Suitable heat resistant material to avoid heat transfer to the passenger saloon area. Fire retardant insulation material shall be used in between the roof inside and outside panels. 3. Inside below window sill: Aluminium Beading with PVC sleeve. 4. Window sill flaps : ABS sill flaps. 5. Inside window pillar flaps: PP/ABS window pillars. 6. Front and Rear face paneling : FRP 7. All remaining paneling : Aluminium / GI Sheets | | |
| 114. | Conductor bell | Iron – Nickel plated type with mounting bracket and lever.with good quality string. | | |
| 115. | Safety bracket for propeller shaft | As per KMVR | | |
| 116. | Safety bracket for | Required (Fully covered | | |

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| | diesel Tank | Grill type) | | |
| 117. | Positioning of switches | All light control switches shall be positioned on the top of the driver seat / on the dash board. | | |
| 118. | Front grill opening | Front grill opening. The flip grill to have sturdy support in opened condition as per OEM design, for Proper cooling of engine | | |
| 119. | Gear box inspection cover | Preferably 75x50mm size inspection cover shall be provided or suitable size as per OEM design | | |
| 120. | Vehicle location tracking device and emergency button | Complying AIS 140 and as approved by KMVD with IRNSS, models with minimum 5 panic buttons necessary software shall also be supplied for Vehicle Tracking, KMPL monitoring, PIS and other performance reports and must be integrated with KSRTC / KSRTC SWIFT applications. No additional payment will be made by KSRTC – SWIFT. No other changes in the clause. | | |
| 121. | Certifications | Comply with a) CMVR and KMVR requirements b) Type approval certificate by any authorized agency in CMVR 126 c) Compliance to strength of super structure- AIS 031 d) Compliance to Bus Body Code AIS 052 & ITS AIS:140 e) Compliance of flammability requirements as per IS 15061:2002 f) Certificate issued by ARAI g) The Gross Vehicle Weight shall be as per the Vehicle Manufacturer design to meet the specifications as per the NIT. | | |
| 122. | Stage inspection of prototype bus by | 1. After the completion of super | | |

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| | KSRTC / KSRTC SWIFT team at the production site | structure (before paneling and fixing of platform) 2.After completion of whole work. The supplier should make arrangements for the inspection timely. | | |
| 123. | Electronic Stability Control | Electronic Stability Control (ESC) to be included in the buses. | | |
| 124. | Dustbin | One good quality dustbin of suitable size shall be provided in the saloon area in a convenient location. | | |
| 125. | Minimum GVW | As per CMVR to meet the specifications as per the NIT. | | |
| 126. | Electronic Stability Control (ESC)-Not Mentioned in the Specification | Electronic Stability Control (ESC) to be included in the buses. | | |
| 127. | FDSS / FDAS: FDSS / FDAS shall be provided as per CMVR / KMVR as required at the time of registration of vehicle. | Shall comply as per CMVR/KMVR. | | |

Place:-

Date:-

Name & Address of the Tenderer

Signature

Seal