



National Defence

National Defence Headquarters  
Ottawa, Ontario  
K1A 0K2

Défense nationale

Quartier général de la Défense nationale  
Ottawa (Ontario)  
K1A 0K2

### SOLICITATION AMENDMENT MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

#### Comments - Commentaires

#### RETURN BIDS TO: RETOURNER LES SOUMISSIONS À :

By e-mail to: - Par courriel au :  
[DLP53BidsReceiving.DAAT53Receptiondessoumissions@forces.gc.ca](mailto:DLP53BidsReceiving.DAAT53Receptiondessoumissions@forces.gc.ca)

Attention: - Attention :  
Dong Le DLP 5-3-4-2

#### Solicitation Closes - L'invitation prend fin

At - à :  
2:00 PM - 14:00

On - le :  
2023 - 10 - 04

Time Zone - Fuseau Horaire :  
Eastern Daylight Time (EDT)  
Heure avancée de l'Est (HAE)

<b>Title - Sujet</b> Highway Bus Cruiser / Autobus Routier		<b>Amendment No. - N° modif.</b> 006
<b>Solicitation No. N° de l'invitation</b> W8476-236718/A	<b>Date of Amendment Date de modification</b> 2023 - 09 - 27	
<b>Address enquiries to: - Adresser toute demande de renseignements à :</b> Dong Le <b>E-Mail Address - Courriel</b> Dong.le@forces.gc.ca		
<b>Destination</b> See herein - Voir aux présentes		

**Instructions:** Municipal taxes are not applicable. Unless otherwise specified herein all prices quoted must include all applicable Canadian customs duties, GST/HST, excise taxes and are to be delivered Delivery Duty Paid including all delivery charges to destination(s) as indicated. The amount of the Goods and Services Tax/Harmonized Sales Tax is to be shown as a separate item.

**Instructions :** Les taxes municipales ne s'appliquent pas. Sauf indication contraire, les prix indiqués doivent comprendre les droits de douane canadiens, la TPS/TVH et la taxe d'accise. Les biens doivent être livrés « rendu droits acquittés », tous frais de livraison compris, à la ou aux destinations indiquées. Le montant de la taxe sur les produits et services/taxe de vente harmonisée doit être indiqué séparément.

<b>Delivery required Livraison exigée</b> See herein - Voir aux présentes	<b>Delivery offered Livraison proposée</b>
<b>Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Person authorized to sign on behalf of Vendor/Firm (type or print):   La personne autorisée à signer au nom du fournisseur/de l'entrepreneur (taper ou écrire en caractères d'imprimerie) :</b>	
<b>Name - Nom</b>	<b>Title - Titre</b>
<b>Signature</b>	<b>Date</b>

**THIS SOLICITATION AMENDMENT IS RAISED TO:**

1. Provide clarification and answers to questions from potential suppliers (reposting amendment 005)
2. Amend the solicitation (Annex A, Requirement – Purchase Description) to clarify and reflect the questions received
3. Amend the solicitation (Annex C, Technical Evaluation Matrix) to clarify and reflect the questions received.

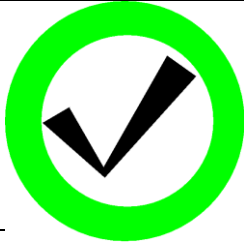
**QUESTIONS AND ANSWERS:**

<b>Question 1</b>	3.5g Passenger Seating ix Passenger seats must be provided with a 4 position reclining mechanism, with up to 178 mm (7 inch) of recline capability, with the exception of passenger seats immediately forward for the lavatory.  Will the following meet DND requirements? Due to the agency's request for a 54- passenger seat layout with airline style food trays, we will provide passenger seats with a maximum of 6" recline, with the exception of the first and second LH and RH row at front of the coach, the seats immediately forward of the lavatory and the rear cross seat, which will be configured with a maximum 2" recline. This configuration will have to be provided to ensure that the food trays will not interfere with the passenger's knees, when the seat in front is being reclined and the tray is folded down.
<b>Answer 1</b>	Yes, acceptable by the Technical Authority.

**THIS SOLICITATION IS HEREBY AMENDED AS FOLLOWS:**

- 2.1 DELETE: "Purchase Description Bus Highway Cruiser" dated 2022-10-04;  
INSERT: "Purchase Description Bus Highway Cruiser" dated 2023-09-25". See attached.
- 3.1 DELETE: "Annex C Technical Evaluation Matrix, Bus Highway Cruiser" dated 2022-10-04;  
INSERT: "Annex C Technical Evaluation Matrix, Bus Highway Cruiser" dated 2023-09-25". See attached.

**ALL OTHER TERMS AND CONDITIONS REMAIN THE SAME.**



**NOTICE**

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

**AVIS**

Cette documentation a été révisée par l'Autorité technique et ne contient pas de marchandises contrôlées.

1. **SCOPE**

1.1 **Scope** - This Purchase Description covers a bus, highway cruiser, rear engine driven, motor coach. The bus will be used for inter-city and across provinces transportation on dirt roads, paved road and highways.

1.2 **Instructions** - The following instruction apply to this Purchase Description.

- (a) Requirements, which are identified by the word "**must**", are mandatory. Deviations will not be permitted;
- (b) Requirements identified with a "will" define actions to be performed by Canada and require no action/obligation on the Contractor's part;
- (c) Where "**must**" or "will" are not used, the information supplied is for guidance only;
- (d) Where a standard is specified and the Contractor has offered an **Equivalent**, that **Equivalent** standard **must** be supplied by the Contractor;
- (e) Where a technical certification is referred to in this Purchase Description, a copy of the certification or an acceptable Proof of Compliance **must** be supplied, when requested by the **Technical Authority** up until the date of the expiration of the warranty period;
- (f) While the SI system **must** be used as the primary system of measurement to define requirements of this Purchase Description, both the SI system and the standard system for this product may be indicated. Conversion from one system of measurement to the other may not be exact; and
- (g) Dimensions stated as nominal **must** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, but which differ from the actual dimensions.

1.3 **Definitions**

- (a) "**Provided**" means "provided and installed";
- (b) "**Technical Authority**" means the official responsible for the technical content of this requirement;
- (c) "**Equivalent**" means a standard, means, or component type, which the **Technical Authority** has approved for this requirement, in

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OPI DSVPM 4 - DAVPS 4

Issued on Authority of the Chief of the Defence Staff

Publiée avec l'autorisation du chef d'état-major de la Défense



RDIMS # 4451448



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writing, as meeting the specified requirements for fit, form, function and performance;

- (d) "**Commercially Equipped**" means that the vehicle is provided in its standard commercial configuration with no additional government-specific requirements;
- (e) "**Curb Weight**" (*CW*) means the weight of the fully equipped vehicle. The curb weight includes the cab and chassis, all attached accessories, equipment, fuel, lubricant and coolants. The **Curb Weight** does not include the **Payload**, the weight of the driver/passenger(s) or their personal kit and equipment; and
- (f) "**Gross Vehicle Weight Rating**" (*GVWR*) means the maximum operating weight of the vehicle as stated by the manufacturer.



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2. APPLICABLE DOCUMENTS - The following documents are referenced in this Purchase Description. Canada will not be supplying any reference documents. Available information on the organization is supplied.

SAE Standards

SAE World Headquarters  
400 Commonwealth Dr.,  
Warrendale, PA, 15096-0001  
<http://www.sae.org>

Motor Vehicle Safety Act (MVSA)

Government of Canada / Transport Canada,  
[Motor Vehicle Safety Act \(1993, c. 16\) \(canada.ca\)](#)



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3. REQUIREMENTS

3.1 Standard Design

- (a) The vehicle **must** be the latest model from a manufacturer who has demonstrated acceptability by selling this type and size class of vehicle for at least three (3) years;
- (b) The vehicle **must** include all components, equipment and accessories normally supplied for this application, although they may be not specifically described in this Purchase Description;
- (c) The vehicle **must** have engineering certification available for this application from the original manufacturers of major equipment, systems and assemblies;
- (d) The vehicle **must** conform to all applicable laws, regulations and industrial standards in effect in Canada at the time of manufacture. The regulatory areas may include but are not necessarily limited to manufacturing, health and safety, noise levels, environment and emissions; and
- (e) The vehicle and accessories **must** operate in accordance with all original equipment manufacturers' (OEM) rated capacities and performance specifications.

3.2 Operating Conditions

3.2.1 Weather - The vehicle **must** start and operate under the extremes of weather conditions found in Canada in temperatures ranging from -40 to 40°C.

3.2.2 Terrain - The vehicle **must** operate in all-weather conditions on highways, secondary roads, gravel roads, and off-road (e.g. construction sites, open fields and dirt tracks).

3.3 Vehicle Safety Regulations - The vehicle **must** meet the provisions of the Canada Motor Vehicle Safety Act.

3.3.1 Human Engineering and Safety

- (a) All systems and components **must** be safe and easy to use by a 5-95<sup>th</sup> percentile male or female;
- (b) Entry and exit points **must** be equipped with handles and steps suitably positioned where required, to accommodate a 5-95<sup>th</sup> percentile male or female under all operating conditions; and
- (c) Safety features such as warning and instructions plates, non-slip surfaces and heat shields **must** be provided where required.

3.4 Vehicle - The vehicle **must** be a highway cruiser bus.

3.4.1 Vehicle Performance

- (a) The vehicle **must** have a road speed of at least 105 km/h when operating fully loaded on a flat level road; and
- (b) The vehicle **must** have gradability at 90 km/h of at least 1.2 % when operating fully loaded; and
- (c) The vehicle **must** have a gross engine horsepower of at least 400 HP;



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3.4.2 Payload

- (a) The vehicle **must** transport at least 54-seated adult passengers;
- (b) The vehicle **must** have a payload capacity of at least 95 kg for the vehicle driver;
- (c) The vehicle **must** have a payload capacity of at least 95 kg per passenger transported; and
- (d) The vehicle payload **must** have a capacity of 30 kg per passenger for luggage per passenger (when the vehicle has a storage compartment).

3.4.3 Weight Rating - The bus **must** have a Gross Vehicle Weight Rating (GVWR) of at least 22,680 kg (50,000 lbs)

3.4.4 Dimensions

- (a) The vehicle **must** have an exterior length of at least 13,700 mm (45 feet);
- (b) The vehicle **must** have an exterior width of at least 2,435 mm (96 inches) but no more than 2,590 mm (102 inches);
- (c) The vehicle **must** have a height of no more than 4,150 mm (163 inches); and
- (d) The vehicle **must** have an interior headroom height at the interior centreline of at least 1,905 mm (75 inches).

3.5 Standard Vehicle

(a) Body Type - The vehicle **must** be at least 54-passenger highway cruiser with forward facing seats;

(b) Vehicle Features

i Windows

- 1. The vehicle **must** be provided with windshield that has a tint band on the superior side;
- 2. The vehicle **must** have a side window in the driver's area;
- 3. The driver's side window **must** open;
- 4. All windows **must** be laminated thermo-panes safety glass (AS);
- 5. The passenger area **must** be provided with panoramic windows with window blinds;
- 6. Windows **must** be rubber mounted or **Equivalent** with a hinge on the top edge;
- 7. All emergency exit windows **must** be clearly labelled push out emergency exit windows;
- 8. Release bars **must** release the lower edge of the windows for opening; and
- 9. Instructions for their use **must** be provided on all emergency exit windows.

ii Fans



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1. The vehicle **must** have two (2) adjustable fans to augment the windshield defrost system;
2. One fan **must** be located in the upper left hand corner of the windshield and the other located at the bottom of the windshield in the centre; and
3. Fans **must** be provided with blade guards.

iii **Windshield Wipers**

1. The vehicle **must** be provided with windshield wipers with at least two (2) continuous speeds and one (1) intermittent speed; and
2. The windshield wipers **must** be provided with winter wiper blades or **Equivalent**.

iv The vehicle **must** be provided with remote controlled scissor style roller windshield blinds or **Equivalent**;

v **Sunscreens**

1. The vehicle **must** be provided with three (3) pull-down sunscreens or **Equivalent**;
2. Each half of the windshield **must** be provided with one sunscreen;
3. The driver's side window **must** be provided with one sunscreen; and
4. The windshield sunscreens **must** be electrically actuated.

vi **Passenger Door**

1. The vehicle **must** be provided with a passenger access door on the right hand side in front of the front axle;
2. The passenger access door **must** be provided with thermal pane AS-2 safety glass windows on the upper half of the door;
3. The passenger access door **must** be air or electrically actuated with the control accessible by a seated driver;
4. The passenger access door **must** be provided with a keyed lock;
5. The seated driver **must** be provided with a momentary switch in the right hand switch panel for door control;
6. The vehicle **must** be provided with a flush mounted external door control beside the passenger access door;
7. The passenger access door **must** be provided with an air operated latch system, which automatically actuates when the door is in a closed position; and



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8. The drivers control and the external lock **must** override the air latch when activated.

vii **Escape Hatch**

1. The passenger area **must** be provided with at least one (1) roof-mounted emergency escape hatch; and
2. The escape hatch **must** have an opening that is at least 560 mm square.

viii **Floors**

1. The vehicle **must** be provided with non-slip rubber floors and toe boards; and
2. The floor covering for the floor and steps **must** be **Equivalent** to Altro - Storm Grey.

ix The driver's area **must** be provided with an interior light with a control switch;

x The driver's area **must** be provided with a coat hook;

xi **Stepwell**

1. The vehicle **must** be provided with a heated stepwell;
2. The material chosen for the stepwell construction **must** be compatible with the surrounding body structure;
3. The stepwell **must** be insulated to reduce heat loss and sound transfer;
4. The stepwell **must** provide with a positive seal where door contacts the stepwell to prevent intrusion of water, dirt, wind, etc; and
5. The stepwell **must** be provided with a stainless steel or polyurethane tube handrails with knuckle clearances, on both sides of the entrance and horizontally on top of the dash.

xii **Service Doors**

1. The vehicle **must** be provided with service doors for the spare tire, condenser compartment, fuel tank filler access and the battery compartment; and
2. The service doors **must** be provided with electronic and/or manual locking devices.

xiii **Parcel Racks**

1. The passenger area **must** be provided with overhead parcel racks;
2. The parcel racks **must** be provided with integral handrails strong enough to serve as a standee support;
3. The handrails **must** extend the full length of the parcel racks on both sides; and

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4. The front corner of the parcel racks **must** be rounded or have an **Equivalent** feature for passenger safety.

xiv Divider

1. The vehicle **must** be provided with a divider located behind the driver's seat; and
2. The divider **must** not interfere with the front passenger seat clearance.

xv The vehicle **must** be provided with a white standee line at the front of the passenger area;

xvi The vehicle **must** be provided with violation decals above the passenger access door;

xvii The vehicle **must** be provided with fabric covered walls;

xvii The vehicle **must** be provided with a ceiling covered with fabric or vinyl clad aluminum material;

xix The fabric/colours used **must** be colour-coordinated with the seating;

xx The vehicle **must** be provided with fiberglass-reinforced plastic panelling on the rear enclosure panel and on the passenger area side of the lavatory walls and door;

xxi The vehicle **must** be provided with stainless steel or **Equivalent** or fiberglass reinforced plastic longitudinal air ducts;

xxii The vehicle **must** be provided with fiberglass-reinforced plastic panelling or **Equivalent** at the upper portion of the passenger access door and to the left of the driver's area below the driver's left hand console;

xxiii The vehicle **must** be provided with painted louvered aluminum or an **Equivalent** covering the driver's evaporator assembly to the driver's right; and

xxiv The vehicle **must** be provided with horn(s) protected from snow clogging.

(c) Vehicle Body Structure

i The vehicle **must** have outside side panels fabricated from fiberglass or **Equivalent**;

ii The vehicle **must** be provided with a light-weight engine compartment door;

iii The vehicle **must** be provided with roof sheets extending from the top of the windows on one side to the top of the windows on the opposite side;

iv The roof sheets **must** have drip lips over all windows;

v The vehicle **must** be provided with a removable inner panels to allow access to the roof cap area;

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- vi The vehicle **must** be provided with left and right removable mouldings to allow access to body wiring harnesses;
- vii The vehicle **must** be provided with inside side panels extending from the window sill down to the floor gusset seat ledge for the entire body length on both sides;
- viii The vehicle **must** be provided with head liner panels spanning the width of the vehicle from window header to window header; and
- ix The vehicle **must** be provided with at least 12 mm plywood flooring.

(d) Vehicle Insulation

- i The vehicle **must** be provided with insulation with an insulation value of at least R5 over all interior surfaces (except windows and doors);
- ii The vehicle **must** be provided with acoustic insulation to maintain an interior noise level of no greater than 82 dB(A) while the vehicle is travelling at 100 km/h on a level paved road;
- iii The vehicle **must** be provided with walls, ceiling and floor with a chemical and flame resistant insulation; and
- iv The vehicle **must** be provided an insulated bulkhead to separate the engine and interior passenger compartment to minimize vibration and noise.

(e) Heating, Ventilation and Air Conditioning

- i The vehicle **must** be provided with a forced air heating, ventilation and air conditioning system;
- ii The driver's area **must** be heated with the heating system provided by the manufacturer of the vehicle chassis;
- iii The heating system **must** use the vehicle engine coolant to provide a heating capacity suitable for the vehicle;
- iv The system **must** include a circulation pump, insulated coolant lines and shut-off valves (for engine or system maintenance);
- v The passenger heating system **must** leave the aisle clear of obstructions;
- vi The passenger heating system **must** allow the use of the area under the seat in front of them as space for their feet;
- vii The passenger heating system **must** be provided with an auxiliary fuel-fired forced-air heating system, which can operate when the engine is shut-down;
- viii The heater **must** have a capacity suitable for the vehicle of at least 100,000-Btu;



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- ix The auxiliary heater **must** have a capacity of at least 42,000-Btu;
- x The system **must** be provided with a control switch and temperature control;
- xi The vehicle **must** be provided with an air conditioning system; and
- xiii The heating and air conditioning system **must** have a capacity of at least 118,000-Btu/hour in the passenger area, and at least 24,000-Btu/hour for the driver's area.

(f) **Driver's Seat**

- i The vehicle **must** be provided with a six way high-back medium to dark coloured upholstered driver seat with lumbar support;
- ii The seat **must** be provided with pivoting arm rests;
- iii The seat **must** be air suspended;
- iv The seat **must** be push button controlled using air from the vehicle air system; and
- v The seat **must** be provided with a retractable shoulder/lap belt assembly.

(g) **Passenger Seating**

- i Passengers **must** be provided with medium to dark upholstered forward facing seats;
- ii Passenger seats **must** be high back style with headrests with full lumbar support;
- iii Passenger seats **must** be provided with wall side armrest or **Equivalent** and pivoting aisle armrests;
- iv Wall armrests **must** be provided which may be fixed or pivoting;
- v Passenger seats **must** have a nominal width of at least 900 mm (35 inches);
- vi Passenger seats **must** be at least 1,092 mm(43 inches) high from the floor to the top of a lowered headrest;
- vii Passenger seating **must** be installed with a centre distance of at least 753 mm(29.5 inches);
- viii Rear cross seats **must** recline a distance of at least 50 mm(2 inch);
- ix Passenger seats **must** be provided with a 4 position reclining mechanism, with up to 152 mm (6 inch) of recline capability, with the exception of passenger seats immediately forward for the lavatory and the rear cross seat that will be 50.8 mm (2 inch);
- x Passenger seats **must** be provided with retracting footrests;



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- xi Passenger seats **must** be provided with aircraft type folding tray tables or **Equivalent**;
- xii Rear passenger seats may be mounted to the rear vehicle shelf;
- xiii All other passenger seats **must** be mounted on a centre T-type pedestal;
- xiv The seats **must** be provided with stainless steel floor track and an aluminum wall track for mounting;
- xv Tracks **must** be permanently affixed to the floor and the wall;
- xvi The seats **must** be mounted to the floor and wall tracks using high tensile strength T-bolts or **Equivalent**;
- xvii Each set of two seats **must** be individually adjustable;
- xviii The passenger seating **must** be provided with aisle side grab rails;
- xix Seats **must** be provided with a retractable shoulder/lap belt assembly; and
- xx Mesh magazine pockets **must** be provided on the back of each seat.

(h) **Mirrors**

- i The vehicle **must** be provided with two (2) mirrors with flat section having an area of at least 60,000 mm<sup>2</sup> each;
- ii Each mirror **must** be provided with a convex mirror section, with an area of at least 15,000 mm<sup>2</sup>;
- iii Mirror glass **must** be replaceable;
- iv Both mirrors **must** be motorized and adjustable from within the cab; and
- v **Mirror Heating**
  - 1. Mirrors **must** be provided with heating systems;
  - 2. Mirror heating **must** be activated by an in-cab control; and
  - 3. Heating elements **must** be replaceable.
- vi The driver's compartment **must** be provided with one interior, adjustable, rear view mirror positioned to allow the driver full view of the interior of the passenger compartment.

(i) **Backup Camera**

- i The vehicle **must** be provided with a backup camera;
- ii The camera **must** be equipped with a camera mounted at the rear of the vehicle to allow visibility when the bus is being backed up;
- iii The camera **must** be positioned to provide optimal visibility; and



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iv A coloured monitor **must** be provided in the driver's area and positioned within easy view of the driver.

(j) Destination Sign

i The vehicle **must** be provided with a front mounted digital display;

ii The destination sign **must** be illuminated, if required, and glass enclosed;

iii The destination sign **must** be preprogrammed with the name of the destination of initial delivery; and

iv The destination sign **must** be programmable to display up to at least 6 different locations.

(k) Under Body Luggage Compartments

i The vehicle **must** be provided with pass through under body luggage compartments accessible from both sides of the bus;

ii The under body luggage compartment **must** have an usable volume of at least 11 m<sup>3</sup>(400-ft<sup>3</sup>);

iii Compartment Doors

1. The under body compartment **must** be provided with doors capable of swinging upwards at least 135° to the fully open position or **Equivalent**;

2. The doors **must** be provided with weather-proof seals;

3. The doors **must** have electric or air operated locks; and

4. The doors **must** be provided with gas struts or an **Equivalent** to hold the doors in the fully open position.

iv Compartment coating

1. The under body compartment **must** be sprayed with Line-X; and

2. The floor of the underbody luggage compartments **must** be covered with a durable perforated vinyl mat **Equivalent** to a Dry-Dek® vinyl floor mat.

(l) Rest Room

i The vehicle **must** be provided with a rest room;

ii The rest room **must** be provided with a forced air ventilation system;

iii The rest room **must** be provided with a chemical toilet;

iv The rest room **must** be provided with a towelette dispenser or **Equivalent** for hand sanitizing;



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- vi The rest room **must** be provided with holding tank for chemical flushing agent;
- vii The rest room **must** be provided with a holding tank for all used liquids;
- viii The rest room **must** be provided with required plumbing; and
- ix The rest room **must** be provided with heater for tank to prevent freezing.

(m) **Audio/Video System**

- i The vehicle **must** be provided with an AM/FM radio with a CD/DVD player with USB and Aux. port with public address system;
- ii All controls **must** be in the driver's area;

iii **Radio**

1. The radio **must** be equipped with a volume control for the speakers in the passenger area; and
2. The radio **must** turn off automatically when the vehicle is turned off.

- iv In addition to the chassis manufacturer's standard speakers, the passenger area **must** be provided with one (1) additional speaker above each set of 2 or 3 seats;

v **Public Address System**

1. The vehicle **must** be provided with a public address system which utilizes all passenger compartment speakers;
2. The public address system **must** be provided with separate volume and tone controls; and
3. The public address system **must** be provided with a push button controlled microphone with cable.

- vi The vehicle **must** be provided with a DVD player;
- vii The vehicle **must** be provided with at least six (6) 380 mm colour LCD wide-screen HD monitors (three on each side), suitably located below the parcel rack;
- viii The vehicle **must** be provided with WI-FI system; and
- ix The vehicle **must** be provided with 110 v outlets with USB with an inverter(s) of at least 3000w.

3.6 **Chassis** - The chassis **must** be reinforced at towing points and equipment mounting points.

3.6.1 **Suspension**

- (a) The vehicle **must** be provided with an eight (8) bag air suspension system;
- (b) The suspension **must** have two(2) air bags for the front axle, four(4) air bags for the driven axle and two(2) air bags for the tag axle;



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- (c) The suspension system **must** be provided with an immediate response automatic height control valves;
- (d) The air suspension system **must** be provided with a manual control dump valve;
- (e) The dump valve **must** evacuate air from the suspension system;
- (f) The dump valve control **must** be accessible to a seated driver;
- (g) The suspension system **must** balance pressures between the drive axle and the tag axle;
- (h) The suspension system **must** include a damping feature in the height control valves to prevent rapid cycling;
- (i) The suspension system **must** have a manual discharge valve for tire changing;
- (j) The air suspension system **must** have systems to raise the rear of the vehicle and to lower the front axle;
- (k) The air suspension system **must** have a system to raise or lower the pressure in the tag axle;
- (l) The suspension system **must** be provided with shock absorbers at all wheel stations;
- (m) Shock absorbers **must** be interchangeable.

3.7 **Engine** - The vehicle **must** be provided with a diesel engine.

3.7.1 **Engine Components**

- (a) **Air Filter**
  - i The engine **must** be provided with an air filter;
  - ii The air filter **must** be a replaceable dry-type; and
  - iii The filter **must** be provided with a filter restriction gauge;
- (b) The engine **must** be provided with an engine coolant suitable for temperatures down to -40 degrees;
- (c) The engine **must** be provided with an exhaust system that directs the exhaust away from the vehicle;
- (d) The cooling system **must** be provided with a thermostatic fan or **Equivalent**;
- (e) The engine **must** be provided with a three-stage engine compression brake;
- (f) The engine controls **must** be provided with an engine speed limiter, which can be adjusted by a dealer;
- (g) **Engine Fire Suppression System**
  - i The vehicle **must** be provided with a fire suppression system;
  - ii The fire suppression system **must** be protect the engine compartment;
  - iii The fire suppression system **must** automatically actuate when fire is detected in the engine compartment.





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3.7.2 Fuel system

- (a) The fuel system **must** have a total capacity of at least 681 litres (180 US gals); and
- (b) The fuel tank filler cap **must** be marked to identify the vehicle fuel.

3.7.3 Engine Cold Weather Aids

- (a) The engine **must** be provided with cold weather aids to enable the engine (operating with winter grade fuels/oils) to be started at temperatures down to -40° C. The engine starting aids may include but are not limited to: glow plug(s) and intake air grid heater;
- (b) The engine **must** be provided with 110-Volt engine block heaters with a capacity as recommended by the engine manufacturer or conforming to SAE J1310;
- (c) The battery **must** be provided with a 110-volt battery blanket or **Equivalent**; and
- (d) The engine **must** be provided with a heated fuel filter/water separator to preheat diesel fuel prior to starting.

3.8 Vehicle Driveline

3.8.1 Automatic Transmission

- (a) The bus **must** be provided with an electronically controlled automatic transmission; and
- (b) The transmission **must** have at least six (6) forward speeds and one reverse speed.

3.8.2 Axles

- (a) The vehicle **must** be provided with a fully locking differential or an automatic traction control on the driven axle;
- (b) The front axle **must** be equipped with kneeling feature and a capacity of at least 7,250 kg (15,984 lbs);
- (c) Rear axle combination **must** be a single rear axle with tag axle;
- (d) A single rear drive axle **must** have a capacity of at least 10,000 kg (22,046 lbs); and
- (e) The tag axle **must** have a capacity of at least 6,350 kg (14,000 lbs) with the appropriate spacing to the single rear drive axle.

3.9 Brake System

- (a) The vehicle **must** be provided with full air actuated service brakes and spring actuated parking brakes;
- (b) The brake system **must** be provided with a 6-channel anti-lock brake system (ABS);
- (c) The brake system **must** be provided with air disc brakes on all axles with automatic slack adjusters;
- (d) The brake system **must** be provided with an air compressor with a capacity of at least 0.51 cubic metres per minute;



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- (e) The brake system **must** be provided with a wet air reservoir capable of being recharged using a quick connect fitting for the connection of an air-line;
- (f) The air reservoir **must** be provided with a pull type drain that is accessible from beside the vehicle;
- (g) The brake system **must** be provided with an automatic air dryer with a heated dump valve;
- (h) The brake system **must** be provided with dust shields on each wheel station; and
- (i) The brake system **must** be provided with emergency brake chambers on the drive axle.

3.10 Steering

- (a) The vehicle **must** be provided with a power assisted steering system; and
- (b) The steering system **must** be provided with a telescopic/tilt steering column.

3.11 Wheels and Tires

- (a) The vehicle **must** be provided with steel-belted, tubeless radial tires;
- (b) All axles **must** be provided with highway tires;
- (c) The tread pattern **must** be **Equivalent** to Michelin XZA-2;
- (d) The tires **must** be mounted on polished aluminum wheels;
- (e) Loose wheel nut indicators **must** be provided;
- (f) The wheel nut indication system **must** be **Equivalent** to SAFE-T-LOC;
- (g) The wheel assemblies **must** have a capacity equal or greater than the load applied, at the top vehicle speed (paragraph 3.4 (a));
- (h) All wheel and tire assemblies **must** be interchangeable;
- (i) The wheel assemblies **must** be assembled in accordance to the tire and rim manufacturer's specifications; and
- (j) Spare Wheel Assembly with Storage
  - i The vehicle **must** be provided with a spare tire wheel assembly compartment with roller mechanism; and
  - ii A dedicated and secure storage location for the wheel assembly **must** be provided behind the front bumper.

3.12 Controls

- (a) The vehicle **must** be provided with cruise control system, which includes a fast idle feature;
- (b) The transmission **must** be prevented from shifting into gear while the fast idle is engaged;
- (c) The fast idle system **must** be prevented from engaging when the when the transmission is in gear; and
- (d) Engine Compartment Controls



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- i The vehicle **must** be provided with engine start and stop controls in the engine compartment; and
- ii The controls in the engine compartment **must** include a switch that allows or prevents the bus being started from the driver's station.

3.13 Instruments

- (a) All dash board gauges and readouts **must** be in metric units;
- (b) The vehicle **must** be provided with a warning light for fire or excessive heat in the engine compartment;
- (c) The vehicle **must** be provided with a warning light for fire suppression system actuation; and
- (d) Global Positioning System
  - i The vehicle **must** be provided with a Global Positioning System (GPS);
  - ii The GPS **must** be programmed to develop a route for a trip between two points; and
  - iii The GPS **must** have a monitor in the driver's compartment.

3.14 Electrical System

- (a) The electrical system **must** be provided with an alternator with an output of at least 240 amperes;
- (b) The electrical system **must** be provided with maintenance-free batteries with a combined rating at least 1,850 cold cranking amperes (CCA);
- (c) The electrical system **must** be provided with a master disconnect switch;
- (d) All electrical circuits **must** be protected with fuses, relays or circuit breakers;
- (e) The wiring **must** be protected by insulating grommets where passing through metal;
- (f) The vehicle **must** be provided with two (2) knockouts for additional switches on the dashboard;
- (g) The electrical system **must** be provided with a backup alarm to alert personnel that the vehicle is in backup mode;
- (h) The vehicle **must** be provided with a 12-VDC power outlet at the driver's station;
- (i) Slave Receptacle
  - i The vehicle **must** be provided with a slave receptacle as close as possible to the battery compartment; and
  - ii The slave receptacle **must** be **Equivalent** to Grote Part number 84-9279.
- (j) The vehicle **must** be provided with manual reset thermal circuit breakers or **Equivalent**;
- (k) Junction Box



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- i The vehicle **must** be provided with a junction box with a 105-ampere breaker for 24-volt power; and
- ii The junction box **must** be located on the front roadside exterior of the vehicle below the driver's window.
- (l) The vehicle **must** be provided with color-coded wiring with number coding;
- (m) Wiring through holes in the vehicle **must** be protected with rubber grommets;
- (n) The vehicle **must** be provided with a 110-volt outlet;
- (o) The vehicle **must** be provided with a Wi-Fi router; and
- (p) The vehicle **must** be provided with a USB port in the driver's compartment.

3.15 Lighting

- (a) The vehicle **must** include integral LED body lighting;
- (b) The lighting system **must** be provided with halogen headlights or LED lights;
- (c) The lighting system **must** be provided with clearance lights, stoplights, turn signal lights, taillights and reverse movement lights;
- (d) Stoplight
  - i The vehicle **must** be provided with stoplight;
  - ii The stoplight **must** be mounted at the rear of the bus centre;
- (e) The vehicle **must** be provided with an engine compartment light;
- (f) The vehicle **must** be provided with fog lights;
- (g) Stepwell Lights
  - i The vehicle **must** be provided with a protected step well light mounted in the right hand front part of the step well; and
  - ii The light **must** be energized when any door is opened or the interior lights are energized.
- (h) Ceiling Lights
  - i The vehicle **must** be provided with one light in the ceiling over the stepwell;
  - ii The vehicle **must** be provided with at least five (5) flush mounted, centre aisle, ceiling lamps with switches located on the dashboard; and
  - iii The ceiling lamps **must** be located to minimize driver glare.
- (i) The vehicle **must** be provided with a reading map light switch installed on dash and accessible to the driver;
- (j) Baggage Compartment Lights



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- i The vehicle **must** be provided with under-body luggage compartment lights; and
- ii The lights **must** be activated through pin switches when the doors are opened, or by an illuminated master light switch located in the driver's compartment.
- (k) The dashboard **must** be provided with a dimmer control to adjust the instrument panel lighting;
- (l) The vehicle **must** be provided with a light mounted in a recessed ceiling fixture above the driver's seat;
- (m) The driver's seat light **must** be controlled from the driver's right-hand switch panel;
- (n) **Passenger Lighting**
  - i The vehicle **must** be provided with a passenger lighting three positions switch;
  - ii With the switch in the "OFF" position all lights **must** be off;
  - iii With the switch in the "LIGHTS" position the lights above the overhead luggage rack **must** be on; and
  - iv With the switch in the "COACH" position the lights above the windows and the aisle lights **must** be on.
- (o) **Passenger Reading Lights**
  - i The vehicle **must** be provided with individually controlled light provided at each seat except the rear cross-seat;
  - ii The lights **must** be mounted in ball sockets or **Equivalent**; and
  - iii The reading light circuit **must** be energized when the vehicle is operating.
- (p) **Toilet Lights**
  - i The vehicle **must** be provided with a dome light in the toilet;
  - ii The dome light **must** be activated when the vehicle is being operated or **Equivalent**; and
  - iii The vehicle **must** be provided with a lighted sign "WASHROOM OCCUPIED" on the forward compartment partition which is activated when the lavatory door is closed and locked from the inside or **Equivalent**.
- (q) The vehicle **must** be provided with a low output night lights.

3.16 **Hydraulic System** - NOT APPLICABLE

3.17 **Lubricants and Hydraulic Fluids**

- (a) The vehicle **must** operate using synthetic non-proprietary lubricants and hydraulic fluids; and
- (b) Grease fittings provided on the vehicle **must** conform to SAE J534 or **Equivalent**.

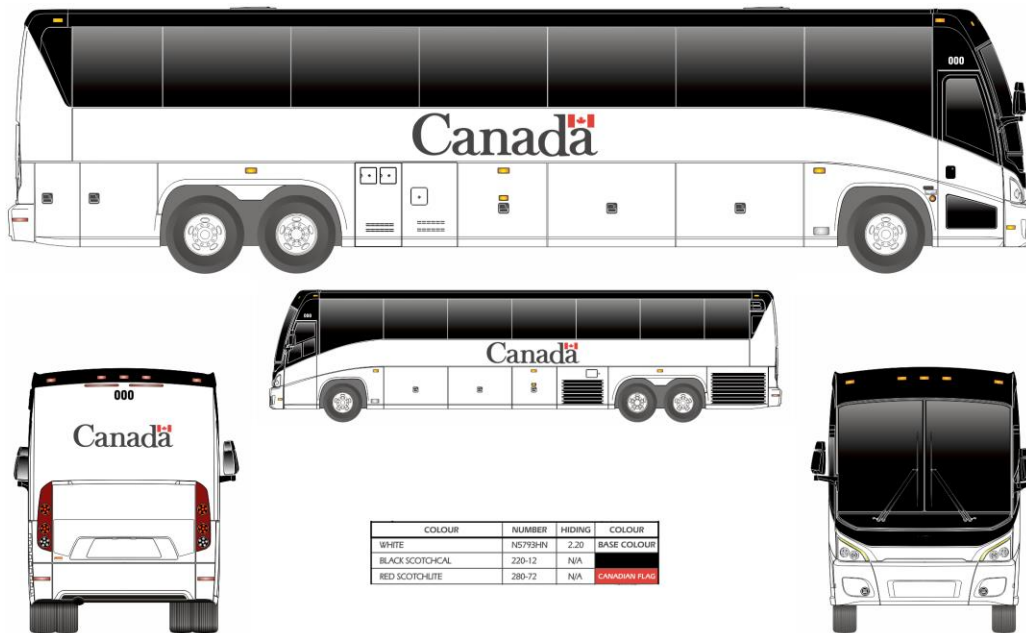
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3.18 Paint Colour - The vehicle **must** be painted in the required colour as identified in the contract.

3.18.1 Corrosion Protection - An approved aftermarket rust protection system **must** be supplied. Rust protection systems that have been approved include Krown Rust Kontrol, Rust Check or an **Equivalent**.

3.18.2 Paint Accessories

(a) Decals - The vehicle **must** have decals provided in accordance with those shown in FIGURE 1 - LOCATION OF DECALS.



**FIGURE 1 - LOCATION OF DECALS**

This figure is only a visual representation of the decals and their position.

3.19 Identification - The vehicle information (manufacturer's name, model, Vehicle Identification Number (VIN) and the GAWR and GVWR ratings) **must** be permanently marked in a conspicuous and protected location.

3.19.1 Warning and Instruction Plates

- (a) The vehicle **must** be provided with warning and operation instruction plates in accordance SAE J115;
- (b) The plates **must** be visible to a person standing near the location; and
- (c) The plates **must** use graphic symbols, as defined in SAE J1362 or be written in the two (2) official languages (English and French).

3.20 Equipment



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(a) Wheel Changing Tools

i Jack

1. The vehicle **must** be provided with a heavy-duty hydraulic jack complete with a jack handle;
2. The jack **must** have a capacity of at least 10,800 kg; and
3. The jack **must** be designed to suit the vehicle lifting locations.

ii Load Distribution Plates

1. The vehicle **must** be provided with load distribution plates which are at least 300 mm square; and
2. The load distribution pads **must** be fabricated from a lightweight material such as wood or aluminum.

(b) Tow Hooks

- i The vehicle **must** be provided with tow hooks mounted at the front and the rear; and
- ii Tow hooks and mountings **must** have sufficient strength to permit the recovery of the vehicle.

(c) Fenders and Splash Guards

i Fenders

1. The vehicle **must** be provided with one piece fenders for all wheel stations; and
2. The fenders **must** be moulded using fibreglass or and **Equivalent** material.

- ii The vehicle **must** be provided with splash guards for front and rear wheel wells.

(d) License Plate Holders

- i The vehicle **must** be provided with front and rear license plate holders; and
- ii The rear license plate **must** be illuminated.

- (e) Filler Caps - The vehicle **must** be provided with filler caps, which identify the contents using international symbols or in French and English; and

(f) Emergency Equipment

- i The vehicle **must** be provided with one (1) 10 unit First Aid kit, stowed near the driver's seat;
- ii The vehicle **must** be provided with three (3) triangular emergency warning signs complete with storage container;
- iii The vehicle **must** be provided with at least 3 signal flares, stored in a container;



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- iv The vehicle **must** be provided with one (1) fireman's axe, securely mounted and readily accessible in the proximity of the driver; and
- v The vehicle **must** be provided with two (2) 2.27 kg dry chemical type fire extinguisher, securely mounted and under the second row curb side passenger seat, each with a minimum 5BC rating; and
- (g) **Bumpers** - The vehicle **must** be provided with the manufacturer's front and rear bumpers.

3.21 **Vehicle Delivery Condition**

- (a) The vehicle **must** be delivered to destination in a fully operational condition (serviced and adjusted);
- (b) The vehicle **must** be completely cleaned;
- (c) For shipment verification, items such as wheel wrenches, jacks, and all other tools, equipment and accessories, which are shipped loose, **must** be listed on the shipping certificate or to an attached packing note;
- (d) The vehicle fuel tank(s) **must** be at least half full on delivery; and
- (e) Lubricants in the vehicle at time of delivery **must** be suitable for the destination and the season of delivery.





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4. **INTEGRATED LOGISTIC ITEMS**

4.1 **Contractor Documentation and Integrated Logistic Items**

4.1.1 **Documents supplied to the Technical Authority**

a) **Manuals for Approval**

- i The Contractor **must** supply access to a set of manuals, in digital format including the operator, parts and maintenance (shop repair) manuals;
- ii The set of manuals **must** include manuals for all the specified accessories and features for the Configuration. Accessory manuals may be included as supplements to the vehicle manuals;
- iii Digital copies **must** be supplied as a searchable PDF;
- iv On-line maintenance manuals may be supplied in lieu of the digital maintenance manuals, however, these **must** be provided without subscription fees;
- v Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection;
- vi Digital copies **must** be supplied on a CD/DVD or USB drive;
- vii A separate CD/DVD or USB drive **must** be supplied with all accessories;
- viii The CD/DVD or USB drive **must** be permanently and legibly marked with a list of contents;
- ix Manuals will not be returned;
- x Manual approval or comments will be supplied within 15 working days of receipt; and
- xi The Contractor **must** supply responses to the **Technical Authority's** comments.

(b) **Photographs and Line Drawings**

- i The Contractor **must** supply two (2) digital colour photographs, one left-front three-quarter full vehicle view, and one right-rear three-quarter full vehicle view;
- ii One (1) digital colour photograph of each attachment taken at the three-quarter view that best illustrates the attachment **must** be supplied;
- iii One front-view and one side-view line drawing showing dimensions of the vehicle **must** be supplied. Brochure line drawings are acceptable;
- iv Photographs **must** have a plain background;
- v Photographs **must** be in a JPEG (Joint Photographic Experts Group) format; and
- vi Photographs **must** have a resolution of at least eight (8) Mega pixels.



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(c) Data Summary

- i The Contractor **must** supply a bilingual data summary, with vehicle data (including accessories and features) and a vehicle picture;
- ii The **Technical Authority** will supply a bilingual template of a data summary to the Contractor;
- iii The Contractor **must** submit a digital copy (MS Word) to the **Technical Authority** of the completed data summary for approval;
- iv Data summary approval or comments will be supplied within 15 working days of receipt; and
- v The Contractor **must** provide responses to the Technical Authority's comments.

(d) Warranty Letter

- i The **Technical Authority** will supply a current bilingual warranty letter template to the Contractor;
- ii The Contractor **must** supply a complete description of the warranty with the requested warranty terms and any system or sub system warranty that exceeds the minimum requested;
- iii The warranty letter **must** include the name and contact information of the closest designated warranty provider and other designated warranty providers across Canada;
- iv Designated warranty providers **must** honour the warranty letter; and
- v The Contractor **must** supply a copy of the warranty letter, in PDF digital format, for each vehicle delivered, to the **Technical Authority**.

(e) Safety Data Sheets

- i The Contractor **must** supply a list, in digital format, of all hazardous materials used on the vehicle;
- ii If there are no hazardous materials are used, this **must** be stated on the list; and
- iii The Contractor **must** supply safety data sheets of all hazardous materials in the list.

(f) Rust Protection Warranty - A copy, in digital format, of the warranty from the rust protection provider **must** be supplied, to the **Technical Authority**;

(g) Training Plan(s) - The Contractor **must** supply the training plan for approval, for each of the training requirements listed in paragraph 4.2 to the **Technical Authority**; and

(h) Line Setting Ticket - The Contractor **must** supply a copy of the production line setting ticket, in digital format, with supplemental listing for each completed vehicle, to the **Technical Authority**.



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4.1.3 Items Supplied with Each Vehicle

- (a) Operator's Manual - The Contractor **must** supply an approved bilingual operator's manual in both paper and digital format;
- (b) Warranty Letter - The Contractor **must** supply a paper copy of the warranty letter;
- (c) Safety Data Sheets
  - i The Contractor **must** supply a set of safety data sheets; and
  - ii The safety data sheets **must** be the same as those provided to the **Technical Authority** as per paragraph 4.1.2 (e).
- (d) Rust Protection Warranty - The Contractor **must** supply a copy of the warranty letter from the rust protection provider;
- (e) Line Setting Ticket - The Contractor **must** supply a copy of the production line setting ticket with supplemental list; and

4.1.4 Additional Items

- (a) Digital Maintenance Manual - English
  - i The Contractor **must** supply the approved searchable digital maintenance (shop repair) manuals in English required for maintenance and repair of the vehicle features and accessories;
  - ii The Contractor may supply this deliverable as a bilingual package;
  - iii On-line maintenance manuals may be supplied in lieu of the digital maintenance manuals, however, these **must** be provided without subscription fees.
  - iv Paper format maintenance manuals may be supplied in lieu of the digital maintenance manuals.
- (b) Digital Parts Manual
  - i The Contractor **must** supply the approved searchable digital parts manuals required the vehicle, features and accessories on a CD/DVD-ROM or USB drive;
  - ii On-line parts manuals may be supplied in lieu of the digital maintenance manuals, however, these **must** be provided without subscription fees; and
  - iii Digital copies **must** be functional without the requirement for a password, an auto-run installation procedure or an Internet connection.

4.2 Training

- (a) Training - Familiarization - English
  - i The Contractor **must** supply a familiarization course in English, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or

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unique features and sub-systems of the delivered model;

- ii The instructor **must** be an OEM Factory Certified Training Provider;
  - iii Curriculum
    - 1. The familiarization course **must** include operation and maintenance segments;
    - 2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
    - 3. The operation segment **must** include sub-systems including automatic grease system and pre-heaters; and
    - 4. The operation segment **must** demonstrate all safety measures required for safe vehicle maintenance.
  - iv The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
  - v The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
  - vi For vehicles shipped to DND, the date for the familiarization course **must** be arranged with the **Technical Authority**, or the identified user or designated contact person for vehicles shipped for users other than DND;
  - vii After completion of the familiarization course, the Contractor **must** have the "PROOF OF FAMILIARIZATION" certificate signed by the senior course attendee; and
  - viii The **Technical Authority** will supply the "PROOF OF FAMILIARIZATION" document template in a digital format.
- (b) Training - Familiarization - French
- i The Contractor **must** supply a familiarization course in French when requested by the **Technical Authority**, at the delivery destination, optimized for operators and technicians who are qualified on the vehicle type but require training on newer or unique features and sub-systems of the delivered model;
  - ii The instructor **must** be an OEM Factory Certified Training Provider;
  - iii Curriculum

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1. The familiarization course **must** include operation and maintenance segments;
  2. The operation segment **must** include safety precautions to be observed while operating and servicing the vehicle, vehicle operating characteristics, pre-operating and shutdown procedures and daily/weekly operator servicing procedures;
  3. The operation segment **must** include sub-systems including automatic grease system and pre-heaters; and
  4. The operation segment **must** demonstrate all safety measures required for safe vehicle maintenance.
- iv The familiarization course **must** have a minimum duration of eight (8) hours, divided into four (4) hours for operators and four (4) hours for technicians;
- v The familiarization course **must** accommodate up to eight (8) personnel; four (4) operators and four (4) technicians;
- vi For vehicles shipped to DND, the date for the familiarization course **must** be arranged with the **Technical Authority**, or the identified user or designated contact person for vehicles shipped for users other than DND;
- vii After completion of the familiarization course, the Contractor **must** have the "PROOF OF FAMILIARIZATION" certificate signed by the senior course attendee; and
- viii The **Technical Authority** will supply the "PROOF OF FAMILIARIZATION" document template in a digital format.



**NOTICE**

This documentation has been reviewed by the Technical Authority and does not contain controlled goods.

**AVIS**

Cette documentation a été révisée par l'Autorité technique et ne contient pas de marchandises contrôlées.

**ANNEX C**  
**TECHNICAL EVALUATION MATRIX**

**BUS, HIGHWAY CRUISER**

This questionnaire covers technical information, which **must** be provided for evaluation of the configuration(s) of the vehicle(s) offered.

Where the specification paragraphs below indicate “**Substantial Information**”, the “**Substantial Information**” describing completely and in detail how the requirement is met or addressed **must** be supplied for each performance requirement/specification.

Bidder is required to indicate the document name/title and page number where the **Substantial Information** can be found.

Definitions for **Equivalent** is found in the DEFINITION section at the end of this document.

**BIDDER INFORMATION**

---

**Bidder Name:** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Proposal Date:** \_\_\_\_\_

**Substitutes/Alternatives**

---

Are any equipment substitutes/alternatives offered as **Equivalent**? YES  NO

If yes, please identify all equipment substitutes/alternatives offered as **Equivalents** below:

\_\_\_\_\_

\_\_\_\_\_

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**OPI: DSVPM 4 – BPR: DAPVS 4**

Issued on Authority of the Chief of the Defence Staff

Publiée avec l'autorisation du chef d'état-major de la Défense



<b><u>Bus Highway Cruiser</u></b>				
<b>PD Reference</b>	<b>Requirement</b>	<b>Substantial Information required</b>	<b>Value</b>	<b>Location of Substantial Information in Bid Proposal</b>
3.4 1. (a)	The vehicle <b>must</b> have a road speed of at least 105 km/h when operating fully loaded on a flat level road			
3.4.1.(c)	The vehicle <b>must</b> have a gross engine horsepower of at least 400HP	<b>Substantial Information</b>		
3.4.2 (a)	<b>Payload</b> - The vehicle <b>must</b> transport at least 54-seated adult passengers;			
3.5. (a)	<b>Body Type</b> – The vehicle <b>must</b> be at least 54-passenger highway cruiser with forward facing seats;	<b>Substantial Information</b>		
3.5 (e) viii	The heater <b>must</b> have a capacity suitable for the vehicle of at least 100,000-Btu;	<b>Substantial Information</b>		
3.5 (e) ix	The auxiliary heater <b>must</b> have a capacity of at least 42,000-Btu;	<b>Substantial Information</b>		
3.5 (e) xii	The heating and air conditioning system <b>must</b> have a capacity of at least 118,000–Btu/hour in the passenger area, and at least 24,000-Btu/hour for the driver’s area.	<b>Substantial Information</b>		
3.5 (f) i	The vehicle <b>must</b> be provided with a six way high-back medium to dark colored upholstered driver seat with lumbar support;			
3.5 (g) i	Passengers <b>must</b> be provided with medium to dark upholstered forward facing seats;			

<b>Bus Highway Cruiser</b>				
3.5 (m) i	The vehicle <b>must</b> be provided with an AM/FM radio with a CD/DVD player with USB and Aux. port with public address system			
3.6.1(a)	<b>Suspension</b> - The vehicle <b>must</b> be provided with an eight (8) bag air suspension system;			
3.7	<b>Engine</b> – The vehicle <b>must</b> be provided with a diesel engine.	<b>Substantial Information</b>  Make Model		
3.7.2(a)	The fuel system <b>must</b> have a total capacity of at least 681 litres (180 US gallons)			
3.8.1 (a)	The bus <b>must</b> be provided with an electronically controlled automatic transmission			
3.8.1(b)	The transmission <b>must</b> have at least six (6) forward speeds and one reverse speed	<b>Substantial Information</b>		
3.8.2(b)	The front axle <b>must</b> be equipped with kneeling feature and a capacity of at least 7,250 kg (15,984 lbs);	<b>Substantial Information</b>		
3.8.2(d)	The single rear drive axle <b>must</b> have a capacity of at least 10,000 kg (22,046 lbs)	<b>Substantial Information</b>		
3.8.2 (e)	The tag axle <b>must</b> have a capacity of at least 6,350 kg (14,000 lbs) with the appropriate spacing to the single rear drive axle	<b>Substantial Information</b>		
3.9 (a)	The vehicle <b>must</b> be provided with full air actuated service brakes and spring actuated parking brakes			



<b>Bus Highway Cruiser</b>				
3.11 (b)	All axles <b>must</b> be provided with highway tires;			
3.14 (a)	The electrical system <b>must</b> be provided with an alternator with an output of at least 240 amperes;			
3.14 (b)	The electrical system <b>must</b> be provided with maintenance-free batteries with a total rating of at least 1,850 cold cranking amperes (CCA)			

**DEFINITION**

The following definition apply to the interpretation of this Technical Information Questionnaire:

- a) **“Equivalent”** - A standard, means, or component type, which has been accepted by the Technical Authority as meeting the specified requirements for form, fit, function and performance.