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Bid Fax: (819) 997-9776

**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

Vendor/Firm Name and Address

Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Marine Emergency Response Division/Division des
Interventions en cas d'urgence maritime
Centennial Towers 7th Floor - 7W11
200 Kent Street
Ottawa
Ontario
K1A0S5

Title - Sujet EREP:53' Hard Sided Trailer EREP:53' Hard Sided Trailer	
Solicitation No. - N° de l'invitation F7047-210031/C	Amendment No. - N° modif. 002
Client Reference No. - N° de référence du client F7047-210031	Date 2022-07-26
GETS Reference No. - N° de référence de SEAG PW-\$ERD-008-28715	
File No. - N° de dossier 008erd.F7047-210031	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM Eastern Daylight Saving Time EDT on - le 2022-08-04 Heure Avancée de l'Est HAE	
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Richards, Shazia	Buyer Id - Id de l'acheteur 008erd
Telephone No. - N° de téléphone (343) 553-2046 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)	
Signature	Date

Solicitation No. - N° de l'invitation
F7047-210031
Client Ref. No. - N° de réf. du client
F7047-210031-008 ERD

Amd. No. - N° de la modif.
002
File No. - N° du dossier
F7047-210031-008 ERD

Buyer ID - Id de l'acheteur
008ERD
CCC No./N° CCC - FMS No./N° VME

Amendment 002

This amendment has been raised to answer Industry questions and to provide a revised Statement of Work (SOW) – *please see attached revised SOW document.*

1. To respond to Industry questions:

Question 2: *15.5.1 The Semi-Trailer must be provided with ten (10) cargo securement bars.*

15.5.2 – The cargo securement bars must function with the wall-mounted logistics tracks.

What is the purpose of the cargo securement bars? How will they be used?

Answer 2:

The purpose is to separate / segregate loads inside the trailer. The bars would be positioned horizontally and connect / lock-in to the tracks on either side of the interior trailer walls.

An example can be seen here:

https://www.uline.ca/BL_3888/Load-Bars?pricode=DD746&AdKeyword=semi%20truck%20load%20bars&AdMatchtype=p&gclid=Cj0KCQjwof6WBhD4ARIsAOi65aiNWLj4NI9THbzMHMn-NCQ5CHmNfJPyqHPruGY3C8SSr40-fOPVUMaAijrEALw_wcB&gclsrc=aw.ds

Question 3: *15.5.4 – The Semi-Trailer must be provided with two (2) heavy-duty telescopic poles.*

What is the purpose of the telescopic poles? How will they be used?

Answer 3: Requirement 15.5.4 has been removed.

Question 4: *15.7.1 – The Semi-Trailer must be provided with railway tie-down points, positioned and of sufficient strength to permit the securing and transportation of the loaded Semi-Trailer on a railroad car.*

Do you have a spec of how many points you need/want? How strong do they need to be? Are you securing with chains, cable, straps? Is there a railroad spec that these points need to be tested to?

Answer 4: Requirement 15.7.1 has been removed.

Solicitation No. - N° de l'invitation
F7047-210031
Client Ref. No. - N° de réf. du client
F7047-210031-008 ERD

Amd. No. - N° de la modif.
002
File No. - N° du dossier
F7047-210031-008 ERD

Buyer ID - Id de l'acheteur
008ERD
CCC No./N° CCC - FMS No./N° VME

2. To replace SOW:

Delete: Statement of Work (SOW) dated June 15th, 2022

Insert: Statement of Work (SOW) dated July 26th, 2022

All other terms and conditions remain the same

Annex A
Statement of Work (SOW)

**Environmental Response Equipment
Modernization/Mobile Incident Command
Equipment Project**

53-Foot Hard Sided Semi-Trailer

July 26th, 2022

STATEMENT OF WORK
TABLE OF CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS.....	II
SECTION 1 INTRODUCTION.....	1
1.1. BACKGROUND.....	1
1.2. PURPOSE.....	1
1.3. SCOPE.....	1
1.4. DOCUMENT CONVENTION	2
1.5. DEFINITIONS	2
SECTION 2 REFERENCE DOCUMENTATION.....	1
2.1. APPLICABLE STANDARDS AND REGULATIONS	1
2.2. REFERENCE DOCUMENTATION VERSION.....	2
2.3. ORDER OF PRECEDENCE	3
SECTION 3 SEMI-TRAILER REQUIREMENTS	4
3.1. DESIGN OVERVIEW.....	4
3.1.1. GENERAL CONSIDERATIONS.....	4
3.2. REQUIREMENTS	4
Material Requirements	6
3.3. DELIVERABLES	15
3.3.1. PROJECT MANAGEMENT DELIVERABLES	15
3.3.2. PRODUCT DELIVERABLES	16
3.3.3. LIFE CYCLE MANAGEMENT DELIVERABLES.....	16
3.3.4. FINAL DELIVERABLES	17
3.3.5. DOCUMENTATION FORMATTING	17
APPENDIX A– WELDING REQUIREMENTS.....	17

STATEMENT OF WORK
ACRONYMS AND ABBREVIATIONS

LIST OF ACRONYMS AND ABBREVIATIONS

ASME	American Society of Mechanical Engineers
ASTM	Formerly known as the American Society for Testing and Materials
BOM	Bill of Materials
CCG	Canadian Coast Guard
COB	Close of Business
CSA	Canadian Standards Association
CWB	Canadian Welding Bureau
DD	Two-digit day
ER	Environmental Response
GVWR	Gross Vehicle Weight Rating
ISO	International Organization for Standardization
MBS	Minimum Breaking Strength
MM	Two-digit month
OEM	Original Equipment Manufacturer
PDF	Portable Document Format
PM	Project Manager
PPE	Personal Protective Equipment
ROD	Record of Decisions
SAE	Society of Automotive Engineers
SOW	Statement of Work
UV	Ultraviolet
YYYY	Four-digit year

SECTION 1 INTRODUCTION

1.1. BACKGROUND

The Canadian Coast Guard (CCG) is the lead federal agency responsible for ensuring the clean-up of all ship-source and mystery-source pollution spills into waters under Canadian jurisdiction. In fulfillment of this legislated mandate, the CCG maintains operational preparedness capacity to monitor, investigate, and respond to all reports of marine pollution incidents. The object of the Environmental Response Equipment Modernization/Mobile Incident Command Equipment (EREM/MICE) Project is to modernize CCG's response equipment inventory and supporting infrastructure.

1.2. PURPOSE

The CCG requires 53-Foot Hard Sided Semi-Trailers to respond to marine pollution incidents and/or other CCG operations. The 53-Foot Hard Sided Semi-Trailer will be deployed in areas accessible by highway, secondary road, and moderate cross-country terrain throughout Canada in support of the CCG Environmental Response (ER) and used to transport and store large and bulky equipment. The 53-Foot Hard Sided Semi-Trailer will be loaded and located outdoors at CCG locations ready for deployment. It will be subjected to weather and the accumulation of precipitation including snow. This Statement of Work (SOW) defines the requirements for the 53-Foot Hard Sided Semi-Trailer (hereinafter referred to as the "Semi-Trailer").

1.3. SCOPE

All requirements, specifications, and other indications in this SOW pertaining to the Semi-Trailer also apply to each individual component of the Semi-Trailer, whether they are acquired together as a complete package, individually, or in any other combination.

STATEMENT OF WORK INTRODUCTION

1.4. DOCUMENT CONVENTION

The following conventions apply to this SOW:

- a. Dimensions stated as nominal are treated as approximate dimensions. Nominal dimensions reflect a standard whereby materials or products are generally identified for commercial sale but differ from the actual dimensions.
- b. Both the metric system and the imperial system of measurements may be indicated in this SOW. Conversions from one system of measurement to the other may not be exact.

1.5. DEFINITIONS

The following definitions apply to this SOW:

Terminology	Definition
Canada Motor Vehicle Safety Standards (CMVSS)	Transport Canada standards, which all vehicles made or sold in Canada and all vehicles imported into Canada, must meet.
Curb Weight	The weight of the fully equipped Semi-Trailer. The Curb Weight includes the Semi-Trailer, all attached components, accessories, equipment, and lubricants. The Curb Weight does not include the Payload.
Equivalent	A standard, means, or component type, which Canada has approved for this requirement as meeting the specified requirements for fit and function.
Gross Vehicle Weight Rating (GVWR)	The maximum operating weight of the Semi-Trailer in accordance with this SOW and confirmed by the manufacturer.
Off-the-Shelf	Any standard articles and materials that are ordinarily produced by manufacturers in the normal course of business.
Provided	The element in question must be delivered, installed, and integrated in a fully operational state.
Storage Condition	The Semi-Trailer is parked on level ground.

SECTION 2 REFERENCE DOCUMENTATION

2.1. APPLICABLE STANDARDS AND REGULATIONS

The Semi-Trailer must conform to all applicable laws, regulations, and industrial standards governing manufacture, safety, noise levels, and pollution in effect in Canada at the time of manufacture. International equivalent laws, regulations, and industrial standards will be accepted only if certified for equivalency by a Professional Engineer and subject to Canada for review.

The following standards and specifications apply to the Semi-Trailer:

- i. Motor Vehicle Safety Regulations, C.R.C., c.1038
 - ii. Motor Vehicle Safety Act, S.C. 1993, c. 16
 - iii. Hazardous Products Act, R.S.C., 1985, c.H-3
 - iv. Trailers: Federal Lighting Equipment Location Requirements, TP 14117
 - v. ASTM A123/A123M-09, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
 - vi. ASTM A153/A153M-16a, Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
 - vii. ASTM A143/A143M-07 (2014) Standard Practice for Safeguarding Against Embrittlement of Hot-Dip Galvanized Structural Steel Products and Procedure for Detecting Embrittlement
 - viii. ASTM A384/A834M-07 (2019) Standard Practice for Safeguarding Against Warpage and Distortion During Hot-Dip Galvanizing of Steel Assemblies
 - ix. ASTM A385/A835M-17 Standard Practice for Providing High-Quality Zinc Coatings (Hot-Dip)
 - x. ASTM A413/A413M-07 (2012), Standard Specification for Carbon Steel Chain
 - xi. ASTM A653/a653M-19a, Standard Specification for Steel sheet, zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
 - xii. ASTM A780/A780M-09 (2015) Standard Practice for Repair of Damaged and Uncoated Areas of Hot-Dip Galvanized Coatings
 - xiii. CSA Certification of Companies for Fusion Welding of Steel, W47.1-09
 - xiv. CSA Certification of Companies for Fusion Welding of Aluminum, W47.2-11 (R2015)
 - xv. CSA W59-18, Welded Steel Construction
 - xvi. CSA Welded Aluminum Construction standard, W59.2
 - xvii. CSA C22.2 NO 18: Outlet Boxes, Conduit Boxes, Fittings, and Associated Hardware;
 - xviii. CAN/CSA-G164-M92 (R2003) Hot Dip Galvanizing of Irregularly Shaped Articles
 - xix. CAN/CSA-Z241 Series-92 (R1998)
 - xx. ISO 3834-2:2005 Quality requirements for fusion welding of metallic materials – Part 2: Comprehensive quality requirements
 - xxi. ISO 3864-1, Safety Colors and Safety Signs, Part 1: Design Principles for Safety Signs and Safety Markings;
 - xxii. ISO 3864- Safety Colors and Safety Signs, Part 2: Design Principles for Product Safety Labels
 - xxiii. Canadian Electrical Code, CSA C22.1
 - xxiv. Lubricant Fittings, SAE J534
 - xxv. Heavy Truck Weight and Dimension Limits for Interprovincial Operations in Canada
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STATEMENT OF WORK
REFERENCE DOCUMENTATION

2.2. REFERENCE DOCUMENTATION VERSION

Unless otherwise specified by Canada, any amendment issued to the documents specified in section **Error! Reference source not found.** must reflect the version in effect on the date of Contract Award.

STATEMENT OF WORK
REFERENCE DOCUMENTATION

2.3. ORDER OF PRECEDENCE

In the event of a discrepancy between this SOW and the documents referenced herein, the Contractor must adhere to the following order of precedence:

- a) Canadian Regulations;
- b) This SOW; and
- c) Industry and other applicable standards and specifications.

SECTION 3 SEMI-TRAILER REQUIREMENTS

3.1. DESIGN OVERVIEW

3.1.1. GENERAL CONSIDERATIONS

- 3.1.1.1. The Semi-Trailer must be able to be registered and pass a Motor Vehicle Safety (MVS) inspection in any Province or Territory in Canada as delivered without any additional costs to Canada.
- 3.1.1.2. The selection of equipment, fittings, fasteners, hardware, attachments, and fabrication methods used in all Semi-Trailers must be standardized to minimize the number of unique spares. Identical components must be used in all Semi-Trailers, following Canada's design acceptance.

3.2. REQUIREMENTS

The Semi-Trailer must meet the following requirements:

1	Standard Design
1.1	The Semi-Trailer must include all components, equipment and accessories normally supplied for this application, although they may not be specifically described herein;
1.2	The Semi-Trailer must have engineering certification available, upon request, for this application from the original manufacturers of major equipment, systems and assemblies;
1.3	The Semi-Trailer 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
1.4	The Semi-Trailer and accessories must operate in accordance with all original equipment manufacturers' (OEM) rated capacities and performance specifications.
2	Operating Conditions
2.1	Weather
2.1.1	The Semi-Trailer must operate safely and effectively in year round weather conditions throughout a temperature range of -40° to 37° C.
2.2	

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

	Terrain
2.2.1	The Semi-Trailer must operate safely and effectively in Canada in support of CCG Operations on highways and secondary roads, gravel roads and dirt roads with washboard and pot holes, in all-weather conditions and with the stated payload.
3	Safety
3.1	Vehicle Safety Regulations
3.1.1	The Semi-Trailer must meet the provisions of the Canada Motor Vehicle Safety Act and the requirements of "Heavy Truck Weight and Dimension Limits for Interprovincial Operations in Canada" for Category 1: Tractor Semitrailer for tandem axle trailer.
3.2	Safety Features
3.2.1	The Semi-Trailer system must be provided with safety features such as warning and instruction plates, non-slip walking surfaces and heat shields where required for operator safety.
4	Performance
4.1	Semi-Trailer Performance
4.1.1	The Semi-Trailer system must be capable of being towed safely at a continuous speed of at least 105 km/h with the stated payload.
4.2	Load Performance
4.2.1	The Semi-Trailer must be designed to carry a uniformly distributed load of at least 22,679kg/50,000 lbs.
5	Dimensions
5.1	The Semi-Trailer must be a 53-foot design with a straight deck flatbed platform. The Semi-Trailer height and width must be maximized while complying with all provincial and territorial regulations and standards without the need for any additional permits for transportation across Canada.
6	Semi-Trailer Construction
6.1	General Requirements

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

6.1.1	The Semi-Trailer must be constructed and finished with a high degree of workmanship, where surfaces are free from blemishes, burrs, defects, irregularities, sharp edges, and other conditions that would be deleterious to the finished component;
6.1.2	Parts must be properly aligned to preclude any binding and deformation as a result of assembly or operation;
6.1.3	All welds and coatings must be uniform, complete, and free of cracks, porosity, and scratches (All welding must be completed in accordance with Appendix A – Welding Requirements, see Appendix A for details on welding procedures, certifications and inspections);
6.1.4	All OEM parts, materials, and equipment must be installed or applied as per the manufacturer's instructions;
6.1.5	All fasteners used must be easily removable if access is required for maintenance and resist loosening due to shock and vibration loading.
6.1.6	All threaded fasteners and associated hardware must conform to the dimensions and tolerances defined in an internationally recognized standard, such as, but not limited to ASME, ASTM, ISO, or SAE Standards; and
6.1.7	The Semi-Trailer must be serviceable with non-proprietary lubricants and fluids.
7	Material Requirements
7.1	All materials used in fabrication must be new, unused and free from defects and imperfection that might affect the serviceability of the finished product, resist corrosion and wear under the environmental conditions specified; and sized or selected to satisfy all the performance requirements specified. The materials must conform to the requirement defined in an internationally recognized standard, such as ASTM, ISO, or SAE standards;
7.2	All synthetic polymers subjected to sunlight must be treated to protect against ultraviolet (UV) degradation, embrittlement, and mold.
8	Kingpin
8.1	The Semi-Trailer must be a tractor trailer fifth wheel coupling design with standard size 51mm (2 inch) kingpin.
9	Semi-Trailer Frame
9.1	The Semi-Trailer must be provided with a frame that is reinforced for towing points; and
9.2	

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

	The Semi-Trailer must be equipped with galvanized components where possible, and treated with industry standard anti-corrosion protection.
10	Floor
10.1	The Semi-Trailer floor must support loading / unloading by a forklift with a 4,540kg GVW and 3,630 kg single axle load;
10.2	The interior flooring must be constructed of kiln dried or seasoned hardwood, tongue and groove or ship-lap, of sufficient thickness to accommodate the load;
10.3	The interior flooring must incorporate a minimum 300 mm wide threshold plate, constructed of checker plated steel or an equivalent, at the rear of the Semi-Trailer, and
10.4	The top surface of the threshold plate must be level with the flooring and fastened into the floor cross members with carriage bolts, or welded across the rear to the floor.
11	Interior Walls
11.1	The Semi-Trailer interior walls must be lined with exterior grade plywood;
11.2	The plywood on the Semi-Trailer interior walls must be covered with a white sheeting material to prevent moisture penetration and damage;
11.3	The Semi-Trailer interior wall surfaces must be provided with kick plates as per the manufacturer's standard design, covering the bottom portion of the plywood surface up to a height of at least 450 mm from the floor;
11.4	The Semi-Trailer sides must be designed with frame members to accommodate all loads that would be expected in conditions year-round while stored outside in Canada (i.e. significant snow build up will be experienced and wind loads); and
11.5	The Semi-Trailer must include two passive vents to provide air exchange in the trailer. The vents must have features to minimize precipitation ingress, and prevent rodent and vermin access. The location and size to be based on contractor's recommendation and subject to approval by Canada.
12	Roof
12.1	The Semi-Trailer roof must be constructed of a solid material secured to the trailer framing;

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

12.2	The Semi-Trailer roof must be designed with frame members to accommodate all loads that would be expected in conditions year-round while stored outside in Canada (i.e. subjected to significant snow build up and wind loads);
12.3	The Semi-Trailer roof must shed water;
12.4	The Semi-Trailer roof structure must be provided with two (2) evenly spaced, full length ceiling mounted rub strips act as a protection to prevent loads from catching on the roof cross members;
13	Rear Doors
13.1	The Semi-Trailer body must be provided with two (2) rear doors directly adjacent to each other that open outwards;
13.2	The rear doors must be full height, full-width "barn type" doors;
13.3	Each rear door must be provided with at least four (4) hinges;
13.4	The rear doors must be provided with compression type door hardware, with provisions for locking them with a padlock;
13.5	The rear doors must be provided with perimeter door seals along all four (4) edges that create a water-tight seal when doors are closed;
13.6	The rear doors must be provided with devices to secure the doors in the full open position;
13.7	The interior door surfaces must be lined with exterior grade plywood;
13.8	The plywood on the Semi-Trailer interior door surfaces must be covered with a white sheeting material to prevent moisture penetration and damage; and
13.9	The interior door surfaces must be provided with kick plates as per the manufacturer's standard design, covering the bottom portion of the plywood surface up to a height of at least 450 mm from the floor.
14	Side Door
14.1	The Semi-Trailer body must be provided with one (1) side door;
14.2	The side door must be located on the curb side, approximately 1/3 from the front of the Semi-Trailer;
14.3	The side door opening nominal dimensions must be 2,032 mm high by 1,092 mm wide (80" high x 43" wide);

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

14.4	The side door must be provided with compression type door hardware, with provisions for locking the door with a padlock;
14.5	The side door must be provided with perimeter door seals along all four (4) edges that create a water-tight seal when doors are closed;
14.6	The side door must be provided with a device to secure the door in the full open position;
14.7	The interior door surface must be lined with exterior grade plywood;
14.8	The plywood on the Semi-Trailer interior doors must be covered with a white sheeting material to prevent moisture penetration and damage; and
14.9	The interior door surface must be provided with a kick plate as per the manufacturer's standard design, covering the bottom portion of the plywood surface up to a height of at least 450 mm from the floor.
15	Features
15.1	Body Panel Joints
15.1.1	The Semi-Trailer body panel joints must prevent moisture ingress.
15.2	Access Steps
15.2.1	The Semi-Trailer must be provided with access steps to gain access into the Semi-Trailer from all the doors, when the doors are open; and
15.2.2	The access steps must feature grab handles for ease of access into the Semi-Trailer.
15.3	Floor-mounted Cargo Rails
15.3.1	The Semi-Trailer must be provided with two (2) cargo rails mounted to the floor interior;
15.3.2	The cargo rails must be recessed and run the full length of the flooring; and
15.3.3	

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

	The two (2) cargo rails must be installed on each side of the floor. The distance from the side wall to be specified by Canada;
15.4	Wall-mounted Logistics Tracks
15.4.1	The Semi-Trailer must be provided with four (4) logistics tracks mounted to the interior of the side walls;
15.4.2	The logistics tracks must be recessed and run the full length of the side walls;
15.4.3	Two (2) logistics tracks must be installed on the curbside wall, at heights of 762 mm and 1,524 mm from the floor; and
15.4.4	Two (2) logistics tracks must be installed on the roadside wall, at heights of 762 mm and 1,524 mm from the floor.
15.5	Cargo Securement Bars
15.5.1	The Semi-Trailer must be provided with ten (10) cargo securement bars; and
15.5.2	The cargo securement bars must function with the wall-mounted logistics tracks.
15.6	Towing Points
15.6.1	The Semi-Trailer must be provided with two (2) rear-mounted towing points, positioned and of sufficient strength to permit recovery of the loaded Semi-Trailer.
15.8	Dock Bumpers
15.8.1	The Semi-Trailer must be provided with heavy-duty rubber dock bumpers at the rear corners, measuring nominally 102 mm (4in) deep.
15.9	Rear Bumper
15.9.1	The Semi-Trailer must be provided with a rear bumper per CMVSS.
16	Chassis and Auxiliary Systems
16.1	Axles
16.1.1	

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

	The Semi-Trailer must be provided with a tandem axle configuration;
16.1.2	The axles must be of appropriate capacity to carry the maximum payload; and
16.1.3	The axles must be provided with dual-wheels at each wheel station.
16.2	Suspension
16.2.1	The Semi-Trailer must be provided with an air bag suspension system;
16.2.2	The suspension system must include an automatic height control valve;
16.2.3	The suspension system must include a manual suspension air dump valve;
16.2.4	The suspension system must include shock absorbers acting on all wheel stations;
16.2.5	The suspension system must include an air gauge to assist the operator in determining system pressure; and
16.2.6	The suspension system must have suspension travel limiters, such as cables or chains fastened to the suspension beam or axle and the under frame, at a length equal to or less than the shock absorber extended stroke. The use of the shock absorbers as travel limiters is not acceptable.
16.3	Wheels and Tires
16.3.1	The Semi-Trailer must be provided with galvanized steel or aluminum wheels and tires certified by the manufacturer to be suitably sized and rated for the application and load;
16.3.2	The dual-wheel assemblies must be identical across the Semi-Trailer system;
16.3.3	The Semi-Trailer must be provided with written indications of the operating tire pressure at each wheel station; and
16.3.4	The wheels must be provided with loose wheel nut indicators at each wheel station.
16.4	Brake System

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

16.4.1	The Semi-Trailer must be provided with an anti-lock, air disc brake system;
16.4.2	The brake system must be provided with remote, cable operated drain valves on the air reservoirs, with heated moisture expelling valve(s);
16.4.3	The brake housings must be equipped with dust shields;
16.4.4	The Semi-Trailer must be provided with colour coded glad hand couplers for interconnection between Semi-Trailer and tractor; and
16.4.5	The Semi-Trailer must be provided with dummy glad hand coupler covers, including a safety chain/cable for each glad hand, to block and protect the air lines when they are not in use.
16.5	Landing Gear
16.5.1	The Semi-Trailer must be provided with an interconnected two-legged, two speed, landing gear system with self-levelling landing pads,
16.5.2	Two synthetic landing pads designed for use with the landing gear and that can be stored in the trailer storage compartment, must be provided; and
16.5.3	The landing gear system must withstand the weight of the fully loaded Semi-Trailer when not connected to the tractor.
16.6	Spare Wheel Assemblies with Storage
16.6.1	The Semi-Trailer must be provided with one (1) spare tire/wheel assembly identical to the other tire assemblies; and
16.6.2	The spare tire/wheel assembly must be mounted on the Semi-Trailer as per the manufacturer's standard location. The mounting must include a locking device to prevent theft.
16.7	Electrical System
16.7.1	The Semi-Trailer must be provided with a 12-volt negative ground electrical system;
16.7.2	The electrical system must provide all power and control for the Semi-Trailer lighting and anti-lock brake system, while the Semi-Trailer is connected to the tractor vehicle;

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

16.7.3	The electrical system must include a SAE J560 7-pin 12 volt Semi-Trailer receptacle, located in accordance with SAE J702;
16.7.4	The electrical system must include, as a minimum, electrical wiring used for the connection to the tractor vehicle intended for heavy-duty use, with positive engaging connectors, which are mounted securely to the system components;
16.7.5	Wiring must be protected by grommets when passing through metal;
16.7.6	The harnesses must be sealed harnesses and all connections treated with dielectric grease; and
16.7.7	All electrical components must be accessible for servicing.
16.8	Lighting
16.8.1	The Semi-Trailer must be provided with a lighting system conforming to CMVSS requirements;
16.8.2	The Semi-Trailer must be provided with LED body lighting;
16.8.3	Lights and reflectors must be recessed or otherwise protected from damage.
17	Miscellaneous Equipment and Markings
17.1	Storage Compartments
17.1.1	The Semi-Trailer must be provided with two (2) lockable storage compartments of industry standard size, located on the curb side. Each compartment must have two doors.
17.1.2	Wheel chocks, that can be stored in the compartment must be provided.
17.2	Mud Flaps
17.2.1	The Semi-Trailer must be provided with heavy duty, flexible, replaceable mud flaps located behind the rear axle.
17.3	License Plate Holder
17.3.1	The Semi-Trailer must be provided with a rear mounted, recessed (or protected from damage in another manner), and illuminated license plate holder located at the rear.

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

17.4	Conspicuity Tape	
17.4.1	The Semi-Trailer must be provided with conspicuity tape conforming to CMVSS requirements.	
17.5	Document Holder	
17.5.1	The Semi-Trailer must be provided with a document holder, located on the road side at the front.	
17.6	Identification Plate and National Safety Mark (NSM)	
17.6.1	The semi-trailer must be provided with an identification plate containing the following information as a minimum: Manufacturer, model, model year, manufacturer's Vehicle Identification Number (VIN) and serial number of the semi trailer, and GAWR and GVWR ratings; The maximum payload capacity must be permanently and clearly marked in a location near the identification plate; and	
17.6.2	The Semi-Trailer must have a permanently affixed National Safety Mark (NSM);	
17.7	Lug Nut Wrench	
17.7.1	A wheel lug nut wrench must be provided.	
17.8	Dangerous Goods Placard Holders	
17.8.1	The Semi-Trailer must be provided with four (4) aluminum dangerous goods placard holders;	
17.8.2	One (1) holder must be mounted at the centre of each side of the van body, near the bottom;	
17.8.3	One (1) holder must be mounted at the rear of the van body, at the lower curb side corner; and	
17.8.4	One (1) holder must be mounted on the front of the van body, on the lower road side corner.	
17.9	Warning and Instruction Plates	
17.9.1	All warning and instruction labels must be in both Canadian English and French in ISO 3864-1 or ISO 3864-2 symbol format; and	

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

17.10	Exterior Colour and Markings
17.10.1	The exterior must be painted in RAL 3000 (red) using high quality automotive paint finish in accordance with the paint manufacturer's recommendations and include the installation of the government furnished decals per manufacturer's recommendation, which will be provided after Contract Award.

3.3. DELIVERABLES
3.3.1. PROJECT MANAGEMENT DELIVERABLES

The Contractor must identify a Project Manager (PM) to oversee all work needed to satisfy the contractual requirements (i.e. tasks, deliverables, resources, schedules, and quality). The PM must be the main point of contact with Canada.

The Contractor must provide Canada with a Meeting Agenda for each scheduled meeting at least three (3) business days prior and a comprehensive Record of Decision (ROD) must be provided within three (3) business days of each meeting (scheduled or unscheduled). At any time prior to the meeting, Canada may request that changes be made to the Meeting Agenda. Canada must review and accept the Meeting Agenda and ROD.

Item	Deliverable	Description	Notes
PM-1	Contract Kick-Off Meeting	The Contractor must convene and co-chair a one-day Contract Kick-Off Meeting to be held via teleconference/videoconference (such as MS Teams). At a minimum, the following documents must be reviewed during the meeting: a. Contract	Unless otherwise specified, this meeting is to be held no later than 14 calendar days after Contract Award. Meeting Agenda due at least 3 business days prior to the meeting. ROD due within 3 business days after the meeting has occurred.

3.3.1.1. Cancellation of Meetings

Canada may cancel meetings at its discretion. Rescheduling of meetings must be done only with the explicit agreement of Canada.

3.3.1.2. Unscheduled Meetings

The Contractor must provide representation at meetings (teleconference or in person) should the need for ad hoc or unscheduled meetings be required.

3.3.1.3. Problem Reporting

The Contractor must notify Canada immediately by telephone upon discovering or identifying an issue that may impact any of the Work. The Contractor must document the issue in writing, within two (2) calendar days of identification, and provide to Canada via e-mail. Canada will advise whether an unscheduled meeting or any other action is required.

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

3.3.2. PRODUCT DELIVERABLES

Item	Deliverable	Description	Notes
PD-1	Product Design Package	<p>The Product Design Package details the Contractor's technical solution for the Semi-Trailer.</p> <p>The Product Design Package must:</p> <ul style="list-style-type: none">a. Meet all requirements detailed in the SOW;b. Include drawings as may be needed to show the location and interconnection of all components ;c.d. Include all relevant system specifications;e. Include all relevant certification and material data sheets; andf. Include all measurements. <p>Each drawing must include a drawing title, drawing number, revision number, drawing scale, units of measure, dimensioned features, legend (as applicable), assembly notes, and the initials of the author of the drawing.</p> <p>The Contractor must provide a Quality Assurance Report for each Semi-Trailer following inspection in order to demonstrate that it meets all of the technical requirements defined in this SOW and is fully operational and ready for deployment. The manufacturer's usual internal checklist(s) will be accepted. The Quality Assurance Report must be certified by the Contractor as an accurate record of the inspection results.</p> <p>Prior to shipping a Semi-Trailer, the Contractor must:</p> <ul style="list-style-type: none">a. Inspect each Semi-Trailer;b. Submit a Quality Assurance Report for the unit; andc. Obtain Canada's formal acceptance for the unit and the Quality Assurance Report. <p>All relevant Certification and Material Data Sheets, or copies thereof, must be appended to each Quality Assurance Report.</p>	<p>First submission due no later than 14 calendar days after the Contract Kick-Off Meeting.</p>
PD-2	Quality Assurance Report		<p>Due 3 business days after completion of quality assurance inspections for each Semi-Trailer.</p>

3.3.3. LIFE CYCLE MANAGEMENT DELIVERABLES

Item	Deliverable	Description	Notes
LC-1	Operations and Maintenance Manual	<p>The manufacturer's standard Operations and Maintenance Manual will be accepted if available. In the absence of a standard manual, a manual must be created and contain the following information:</p>	<p>Due 20 calendar days prior to first shipment of the Semi-Trailer.</p>

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

Item	Deliverable	Description	Notes
		At a minimum, the operation section must include pre- and post-operational checklists. At a minimum, the maintenance section must include the Preventative Maintenance schedule .	Must be formally accepted by Canada prior to shipping any Semi-Trailer. Unless otherwise specified by Canada, the Contractor must provide 1 hard copy of the manual in English with each Semi-Trailer. An electronic copy of the manual is also required. If a French version of the manual is available, the vendor is required to provide an electronic copy.

3.3.4. FINAL DELIVERABLES

In addition to required documentation detailed in the SOW, the Contractor must provide, at a minimum, the following deliverables for each Semi-Trailer:

- Key components: Semi-Trailer, Semi-Trailer superstructure, and all accessories;
- Keys – four (4) sets of keys for all keyed doors and locks;
- Proof of National Safety Mark (NSM) compliance;
- Bill of Sale and any additional documentation required for licensing and registration in Canada; and
- One (1) hard copy of the Operations and Maintenance Manual.

3.3.5. DOCUMENTATION FORMATTING

Canada requests that all digital and hard copies of documentation (with the exception of drawings, which must be available in 11 x 17 inch paper size) use 8.5 x 11 inch paper size in sans serif typeface with minimum font size of 10 and are in PDF file format, unless otherwise specified by Canada. For example, the use of Arial size 10 is acceptable. Hard copies must be printed using at least 600 DPI, double-sided, and must be collated and bound, unless otherwise specified by Canada.

APPENDIX A – WELDING REQUIREMENTS

Steel – Weld Procedure and Welding Personnel Qualification Requirements

The Contractor or subcontractors performing the welding of steel must meet one of the following requirements for qualification of welding procedures and welding personnel – welding supervisors, welders and tack welders:

- Certification by the Canadian Welding Bureau (CWB) to CSA Standard W47.1-2019 Division 1, 2 or 3.
- Certification by an International Institute of Welding (IIW) Authorized National Body for Company Certification (ANBCC) to ISO Standard 3834 – 1, 2 or 3.
- Third party accredited organization administration of American Welding Society (AWS) D1.1: 2015– Structural Welding Code Steel

Aluminum – Weld Procedure and Welding Personnel Qualification Requirements

The Contractor or subcontractors performing the welding of aluminum must meet one of the following requirements for qualification of welding procedures and welding personnel – welding supervisors, welders and tack welders:

- Certification by the Canadian Welding Bureau (CWB) to CSA Standard W47.2-2011 (R2015) Division 1, 2 or 3.

STATEMENT OF WORK
53' HARD SIDED SEMI-TRAILER REQUIREMENTS

2. Certification by an International Institute of Welding (IIW) Authorized National Body for Company Certification (ANBCC) to ISO Standard 3834 – 1, 2 or 3.
3. Third party accredited organization administration of American Welding Society (AWS) D1.2: 2014 – Structural Welding Code Aluminum

Welding Personnel – Steel and Aluminum

Welding must only be conducted by currently qualified individuals. Welders must be certified by an organization acceptable to the location in which the work is being carried out, the Trailer is being licensed and for the type of material being welded.

Welder performance qualification cards and government issued photo ID must be filed with the CCG TA prior to performing any welding work.

Weld Inspection Requirements – Steel and Aluminum

All completed welds must be visually examined their entire length by a certified third party, provided by the Contractor.

Safe access must be given to the CCG TA and third party inspector(s), by the Contractor. Visual examination of welds must follow procedures that are generally compliant with the established requirements of ASME BPVC-V-2019, Article 9. Where the lighting, viewing distance and viewing angle requirements for direct visual examination can't be met, then remote or translucent visual examination following the requirements of ASME BPVC-V-2019, Article 9 may be used by the third party inspector with the express consent of the CCG TA.

Visual examination of welds must occur in the as-welded condition after removing slag, spatter, magnesium oxide smut and wire brushing. Weld profiles must not be altered by any means prior to visual examination and fairing compounds, fillers, primers and/or paints must not be applied to the visible surfaces of welds prior to visual examination.

The acceptance standards for visual examination are as follows:

- Weld toes must blend smoothly into the base metal at each side of the weld.
- There must be no overlap, no undercut, no visible porosity, no cracks, no visible fusion faults.
- Welds must not have undersized leg lengths or throat sizes
- Fillet welds must not have leg lengths or throat sizes more than 2 mm greater than the specified amount.
- Convexity for fillet welds must not exceed 2 mm.
- Excess weld metal for groove welds in butt joints must not exceed 3 mm.
- Craters must be filled with weld metal.

A copy of the visual inspector's qualification card as well as the written visual examination procedure to be followed must be filed with the CCG TA prior to any examinations taking place.

A formal report must be provided by the third party inspector to the CCG TA indicating acceptance or rejection of the welds to the acceptance criterion herein prior to scheduling CCG TA acceptance examinations.

Welds not meeting the acceptance standards for visual examination specified herein must not be repaired without the express consent of the CCG TA.

The Contractor is solely responsible for the repair of welds not meeting the acceptance standards for visual examination specified herein.

A weld that is found to be unacceptable in accordance with the acceptance criterion herein must not be repaired more than twice.

If the second repair attempt fails, the affected material and welds must be removed and new material fitted and welded to the original requirements of this Specification.

The CCG TA may at its discretion engage an outside party to perform welding audits of the Contractor at the place where welding work takes place at a frequency deemed necessary by the CCG TA
