LA-RICS

LOS ANGELES REGIONAL INTEROPERABLE COMMUNICATIONS SYSTEM AUTHORITY

2525 Corporate Place, Suite 100
Monterey Park, California 91754
Telephone: (323) 881-8291
http://www.la-rics.org

SCOTT EDSON
EXECUTIVE DIRECTOR

SENT CORRESPONDENCE BY:
E-MAIL

August 28, 2019

ADDENDUM C
INVITATION FOR BIDS FOR
CELL ON LIGHT TRUCKS AND CELL ON PICKUP TRUCKS
IFB NO. LA-RICS 016

This Addendum C forms part of the Invitation for Bids (IFB) for Cell on Light Trucks (COLTS) and Cell on Pickup Trucks (COPTS) (IFB No. LA-RICS 016), issued July 16, 2019.

REVISIONS

1. Section 1.1 (Purpose) of the IFB is revised to remove the reference to 4x4 Cell on Light Truck (COLT).

2. Please note the Bid Due Date has been extended to **September 10, 2019**. Accordingly, Section 2.3 of the IFB (IFB Timetable) is deleted in its entirety and replaced with the following:

   2.3 IFB Timetable

   The timetable for this IFB is set forth in the table below:

EVENT	DATE/TIME
Release of IFB	**07/16/19**
Request for a Solicitation Requirements Review Due (10 business days after release of solicitation document)	**07/30/19 by 5 p.m. PST**
Bidders Conference	**07/31/19 at 9 a.m. PST**
Written Questions Due	**08/07/19 by 5 p.m. PST**
Bid Due Date	**09/10/19 by 3 p.m. PST**

3. The title on the Title Page of Appendix B.1 (COLT Specifications) has been deleted and replaced with the following:

Los Angeles Regional Interoperable Communications System
Cell on Light Truck (COLT) Specifications

4. Section 10.2.1 of Appendix B.1 (COLT Specifications) and Reference No. 10.2.1 of Exhibit 13 (Bidder's COLT and COPT Compliance Matrix – COLTS Requirement only) of Appendix C (Required Forms) are deleted in their entirety and replaced with the following:

   10.2.1 The vehicle of the COLT shall consist of a 4x2 cab over truck. The weight rating of the vehicle shall be no less than the rating required for the vehicle to support 110% of the net weight of all equipment necessary to achieve the vehicle performance requirements herein, or 19,000 lbs. gross vehicle weight rating (GVWR), whichever is greater.

5. Section 10.4.2 of Appendix B.1 (COLT Specifications) and Reference No. 10.4.2 of Exhibit 13 (Bidder's COLT and COPT Compliance Matrix – COLTS Requirement only) of Appendix C (Required Forms) are deleted in their entirety.

6. Section 8.1 of Appendix B.2 (COPT Specifications) and Reference No. 8.1 of Exhibit 13 (Bidder's COLT and COPT Compliance Matrix – COPTS Requirement only) of Appendix C (Required Forms) are deleted in their entirety and replaced with the following:

   8.1 Contractor shall provide a pickup truck vehicle and other components that are part of the COPT no later than 160 calendar days after contract award, or a date specified by the User Agency. The base vehicle does not have to meet the normal definition of pickup truck. The LARICS Authority will accept any truck model up to a class 6 medium duty Cab and Chassis vehicle. The vehicle must be 4x4 vehicle and sized appropriately to handle the vehicle and equipment total load weight including the generator, batteries, LTE equipment, HVAC, mast, and cabinets.

7. Section 10.4.1.1 of Appendix B.2 (COPT Specifications) and Reference No. 10.4.1.1 of Exhibit 13 (Bidder's COLT and COPT Compliance Matrix – COPTS Requirement only) of Appendix C (Required Forms) are deleted in their entirety and replaced with the following:

   10.4.1.1 The COPT VEHICLE transmission systems will have at least 6-speeds with double overdrive and a heavy-duty automatic transmission. COPT shall include the following:

1. Front Axle, Front Driving {Dana Spicer 60-256} Single Reduction, 7,500-lb Capacity, with Hub Piloted Wheel Mounting

2. Rear Axle shall be Dana Spicer S16-130 with Single Reduction, 15,500-lb Capacity, 190 Wheel Ends Gear Ratio: 4.88

ADDITIONAL INFORMATION

Enclosed to this Addendum C is the electronic copy of Exhibit 13 (Bidders COLT and COPT Compliance Matrix) contained in Appendix C (Required Forms) (Enclosure).

Bidders are encouraged to notify its subcontractors of the information contemplated in this Addendum C.

Except as expressly modified or clarified by this Addendum C, all other terms and conditions of the IFB shall remain unchanged.

If you have any questions regarding this Addendum C, please contact Ms. Melissa Saradpon at (323) 881-8289 or at melissa.saradpon@la-rics.org.

Sincerely,

SCOTT EDSON
EXECUTIVE DIRECTOR

JA:ms:pdd
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cc: Counsel to the Authority

Enclosure

BIDDERS COLT AND COPT COMPLIANCE MATRIX

BIDDER NAME: _____

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
COLT REQUIREMENTS					
SPECIAL INSTRUCTIONS					
1.1	The Contractor shall guarantee the per-unit contract price(s) for a period of twenty-four (24) calendar months from the Effective Date of the Contract. The Contractor shall allow the same price(s) to a requesting LA-RICS Authority Member Agency.	X			
1.2	The delivery date of the completed unit(s), shall not exceed 160 days from the Effective Date or date agreed upon by the Contractor and the LA-RICS Authority and/or LA-RICS Authority Member Agency (collectively, "User Agency").	X			
WARRANTY					
2.1	The Contractor shall provide a minimum warranty of five (5) year/100,000 mile warranty for the entire COLT (including vehicle and all specialty equipment), barring accident damage, abuse, or routine maintenance items, i.e., tires, brakes, windshield wipers, etc. or, the original equipment manufacturer's warranty, whichever is greater.	X			
2.2	The vehicle warranty work will be performed at a dealership in Los Angeles County (County).	X			
2.3	Warranty period will start on the day the COLT is put into service by the User Agency, not the day of COLT delivery. Delayed warranty start not to be more than six (6) months from COLT final delivery date.	X			

ENCLOSURE

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
2.4	Future installation of equipment, installed according to manufacturer guidelines, by the LA-RICS Authority or designee shall not void warranty.	X			
2.5	Warranty card to be delivered to User Agency.	X			
2.6	All COLT components substituted or changed upon Effective Date, and any component deviations initiated at the discretion of COLT manufacturer shall be warranted by the manufacturer for parts replacement and parts installation. The warranty shall be effective from the day the COLT is put into service by User Agency.	X			
EMISSION STANDARDS					
3.1	Manufacturer's Standard Equipment and all devices necessary to comply with the Federal Motor Safety Standards will be included in the COLT.	X			
3.2	COLT shall comply with all Federal Emission Standards on crankcase, exhaust, and applicable California State laws on crankcase and fuel emissions.	X			
GENERAL SPECIFICATIONS AND STANDARDS					
4.1	All equipment furnished will be subject to the approval of the User Agency.	X			
4.2	The vehicle's body, finish, and fittings shall be the latest model. The vehicle provided shall be new and not have been used in a demonstration or other service, and shall be factory standard in all respects and not in conflict with any specification requirements.	X			
4.3	Trade names mentioned in these vehicle plans and specifications are not restrictive and are given only to indicate the type of material which will be acceptable. When furnishing other than these trade name items, they shall be of equal or better quality and shall be approved by User Agency.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
4.4	All deviations or component changes shall be approved by the User Agency.	X			
4.5	One (1) copy of the Maintenance Service Manual including electrical wiring diagrams shall be furnished by Contractor within 45 days of the receipt of the Purchase Order or payment will be delayed. In addition, one (1) copy of all technical bulletins pertaining to the COLT shall be provided in a timely manner.	X			
4.6	Contractor shall furnish a Bill of Sale and title for the vehicle in the name of: Los Angeles Regional Interoperable Communication System (LA-RICS) Authority 2525 Corporate Place, Suite 100 Monterey Park, CA 91754	X			
4.7	Contractor shall provide bill of sale and title within fifteen (15) days verification of order. Verification is to be forwarded to the Contract Manager/Fleet Manager/equivalent of User Agency and LA-RICS Authority.	X			
4.8	Contractor to furnish invoice at time of delivery for each COLT received by User Agency.	X			
DELIVERY					
5.1	COLT Vehicles will have the Contractor preparation service work, normally performed by the Contractor, completed before delivery.	X			
5.2	Contractor preparation shall include the removal of all window stickers, transport papers, etc., that are adhered to the windows or any other portion of all vehicles. Vehicles shall not be delivered with any type of license plate frame or placard identifying the Contractor's name or company information.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
5.3	The final delivery date of the complete order of COLTs may not be later than 160 calendar days after contract award, or a date agreed upon between the Contractor and the LA-RICS Authority.	X			
5.4	COLTs, upon acceptance test by the User Agency, shall be ready for service at the time of final delivery date.	X			
5.5	COLTs shall be delivered clean, with full tank of fuel, and batteries full and ready for immediate operation.	X			
5.6	User Agency personnel shall inspect all vehicles for compliance with these COLT Specifications. If defects are found requiring correction, it shall be the Contractor's responsibility make the correction and return the COLT or part back to the User Agency for inspection. All transportation to and from the designated delivery location shall be the responsibility of the Contractor until the vehicles are accepted by User Agency.	X			
5.7	All vehicles shall be delivered to a location designated by User Agency at the date and time agreed upon by Contractor and User Agency.	X			
COMPLIANCE WITH CODES AND STATUTES					
6.1	The complete vehicle shall in every respect, comply with and/or conform to, the latest editions of the State of California Motor Vehicle Codes, Federal Motor Vehicle Safety Standards, National Electrical Code Standards, Health and Safety Codes and provisions of the Occupational Safety and Health Act, and applicable NFPA requirements.	X			
6.2	THIS VEHICLE IS USED FOR RESPONDING TO EMERGENCY CALLS AND IS EXEMPT FROM THE REQUIREMENTS OF CALIFORNIA LAW FOR MOTOR VEHICLE POLLUTION CONTROL DEVICES AS PER SECTION 27156.2 OF THE CALIFORNIA VEHICLE CODE.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
6.3	It is the sole responsibility of the Contractor to advise the LA-RICS Authority and/or User Agency in writing of any conflicts between the requirements herein and the aforementioned Codes and Standards.	X			
6.4	The Contractor shall secure all approvals, certifications and inspections from appropriate State and local authorities. Before the delivery of the vehicle the Contractor shall provide relevant paperwork demonstrating the vehicle is in road-worthy and safe driving condition and meets all legal requirements to be driven on California roads.	X			
INTENT OF SPECIFICATIONS					
7.1	It is the intent of these specifications to obtain a Cell On Light Truck (COLT) and related equipment that shall meet the construction and performance requirements reflected herein.	X			
7.2	These specifications are intended to describe the type, size, and quality of the COLT and related equipment desired and to cover the furnishing and delivery to the User Agency of complete apparatus equipped as hereinafter specified.	X			
7.3	Nothing in these specifications is intended to prevent the use of systems, methods, or devices or equivalent or superior quality, strength, effectiveness, durability, and safety in place of those prescribed by these specifications.	X			
7.4	Minor details of construction and materials, where not otherwise specified, are left to the discretion of the manufacturer, who shall be solely responsible for the design and construction of all features.	X			
GENERAL TECHNICAL SPECIFICATIONS					
8.1	Contractor shall provide a cabover vehicle and other components that are part of the COLT no later than 160 calendar days after contract award, or a date specified by the User Agency.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
8.2	The COLT shall be capable of providing secure and reliable connectivity between a compatible FirstNet Ready device provisioned with a FirstNet SIM and the AT&T/FirstNet network infrastructure.	X			
8.3	Contractor shall be responsible for providing all COLT components required for a fully operational Long Term Evolution (LTE) coverage extension of the AT&T/FirstNet network except those components listed in Attachment A (FRMZ Components) to this Appendix B.1, COLT Specifications, and in the case of the FRMZ Components, Contractor shall be responsible for providing a vehicle host system capable of structurally containing those components, powering those components, and providing an environment that assures the continued operations of those components.	X			
8.4	Contractor shall be responsible for all the tasks in identified in these specifications such that the COLT System meets all the objectives outlined in Section 10, COLT Objectives, and satisfy all functional, performance, and scope of work elements in these COLT Specifications. All components provided by the Contractor, except the vehicle are referred in these COLT Specifications as COLT Support System. The vehicle, the COLT Support System, and FRMZ Components, together form the COLT System.	X			
8.5	The LA-RICS Authority and/or User Agency endeavors to complete its final design review of the COLT to ensure that the vehicle, components, etc. adhere to the LA-RICS Authority's requirements within seven (7) days from the date of submission of the final COLT design.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
8.6	Contractor shall provide all user manuals as-built documentation, and any other requested documentation to the User Agency at the time of initial vehicle delivery. The documentation includes one hard copy and one soft copy in PDF provided by the Contractor on a USB drive no later than seven (7) days from the Effective Date or a date specified by the LA-RICS Authority and/or the User Agency. Should the LA-RICS Authority instruct the Contractor to perform additional work on the COLT, Contractor shall provide updated literature to contemplate the additional work to the LA-RICS Authority and/or User Agency within seven (7) calendar days of the work requested.	X			
8.7	If there is a conflict between codes, ordinance, regulations, standards, and these COLT Specifications the most stringent requirement will govern. If there is a conflict within this COLT Specification, the most stringent requirement will govern.	X			
	COLT OBJECTIVES				
9.1	COLT shall connect to FirstNet/AT&T core from any location in Los Angeles County (e.g., Angeles National Forest, Rancho Palos Verdes, etc).	X			
9.2	COLT shall be capable of travel on any passable road within L.A. County. The COLT shall be capable of off-road travel on dirt and gravel roads. It shall be capable of operating on roads eleven (11) feet in width or wider. All COLT systems and components shall be capable of continued and sustained operation following travel on such roads.	X			
9.3	The maneuverability of the COLT shall exceed a comparably sized van and have a short wheelbase and tight turning radius without affecting the stability of the COLT.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
9.4	COLT shall be drivable with basic Class C driver's license.	X			
9.5.1	COLT shall be able to support emergency response deployments with the following: Quick setup time with the ability to fully deploy the COLT with LTE service in 30 minutes under ideal weather conditions.	X			
9.5.2	No or minimal technical knowledge required to setup COLT.	X			
9.5.3	Auto aligning satellite capability to connect the COLT to the FirstNet Evolved Packet Core.	X			
9.5.4	Weight distribution and outrigger/stabilizing struts to ensure stability of the COLT while mast is deployed.	X			
9.5.5	Pneumatic Mast deployment supporting variable deployment heights but will not require guy wires below 30 feet with wind speeds less than 30 mph, and with a net mast wind surface area less than 35 square feet.	X			
9.5.6	Mast attachable antenna mount for ease of deployment of multiple types of antennas.	X			
9.6	All COLT System Components will be new and unused at the time of installation.	X			
9.7	Firmware and software will be the same for all like devices at the time of Final COLT System Acceptance.	X			
9.8	All COLT System Components will be of current design and manufacture. The COLT System will not contain any components not in current production or that is scheduled for discontinuance within five (5) years of the Effective Date.	X			
9.9	All software licenses will be a one-time cost.	X			
COLT VEHICLE SPECIFICATIONS					
Turning capability					

ENCLOSURE

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
10.1.1	The COLTs turning capability will be equipped with an applicable factory steering assist system.	X			
10.1.2	The wheel base will be short enough to ensure appropriate turning radiuses. The turning radius shall not exceed 35 feet.	X			
Vehicle Carrying Capacity					
10.2.1	The vehicle of the COLT shall consist of a 4x2 cabover truck. The weight rating of the vehicle shall be no less than the rating required for the vehicle to support 110% of the net weight of all equipment necessary to achieve the vehicle performance requirements herein, or 19,000 lbs. gross vehicle weight rating (GVWR), whichever is greater.	X			
10.2.2	The vehicle shall be able to contain all LTE and microwave cabinets, generator, battery backup systems, and any other equipment required by the COLT System.	X			
10.2.3	Contractor shall indicate the vehicle's gross combination weight rating (GCWR) and the excess carrying capacity that can be used by the future growth.	X			
10.2.4	The COLT suspension system shall be capable of supporting the vehicle and payload within the gross vehicle weight rating (GVWR) and GCWR.	X			
10.2.5	Suspension system ratings shall be provided to ensure compliance with GVWR and GCWR ratings.	X			
10.2.6	Front and rear axle ratings shall be provided to ensure compliance with the GVWR and GCWR ratings.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
10.2.7	The maximum overall height of the vehicle, including all apparatus, while the vehicle is in motion, shall not exceed thirteen (13) feet.	X			
Engine					
10.3.1	The COLT vehicle engine will be equipped with at least a Turbo Diesel rated at > 200hp @ 2,500 rpm and 400 lb.ft of Torque @ 1,800 rpm.	X			
10.3.2	The engine shall be sized to ensure the vehicle can support all COLT equipment and achieve all performance requirements.	X			
10.3.3	The COLT engine compartment shall employ a heavy-duty cooling system for the engine systems.	X			
10.3.4	The COLT vehicle shall also have a minimum of 600 Watt engine block heater.	X			
Transmission System					
10.4.1	The COLT vehicle transmission systems shall have at least a 5-speeds and a heavy-duty automatic transmission.	X			
~~10.4.2~~	~~The COLT vehicle transmission systems will have a 4-wheel drive high/low range select shift from the interior of the vehicle.~~	X			
Electrical System					
10.5.1	COLT vehicle shall have an alternator rated at least at 140 amps.	X			
10.5.2	The COLT vehicle shall have at least 2 Maintenance-Free Batteries or more batteries with CCA (cold cranking amps) at 700 CCA or more.	X			
Brakes and Wheels					
10.6.1	The COLT vehicle shall have hydraulic brakes with 4-Channel anti-lock braking system (ABS).	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
10.6.2	The COLT vehicle shall have two (2) sets of rear wheels.	X			
10.6.3	The COLT vehicle shall have at least 19.5" heavy-duty wheels in the front and rear.	X			
10.6.4	Front suspension shall have taper spring 8,400 lbs. capacity.	X			
10.6.5	Rear suspension shall have multi-leaf spring with 14,500 lbs capacity.	X			
Tires					
10.7.1	The COLT vehicle tires shall have a radial design.	X			
10.7.2	If feasible, the COLT vehicle tire type will be run flat.	X			
10.7.3	The COLT vehicle tires shall be suitable for all weather conditions including for use on non-paved roads for the full Net Vehicle System weight.	X			
10.7.4	The COLT vehicle shall be provided with four wheel chocks.	X			
10.7.5	Contractor shall provide a matching spare wheel, full size tire, and an interior spare tire mount.	X			
Interior Features **The COLT shall have the following interior features:**					
10.8.1	Power Steering	X			
10.8.2	Power disk brakes	X			
10.8.3	Four wheel ABS	X			
10.8.4	Parking brake	X			
10.8.5	Air Conditioning	X			
10.8.6	AM/FM radio	X			
10.8.7	Integrated Bluetooth and steering wheel audio control	X			
10.8.8	Tilt & Telescopic Steering wheel	X			
10.8.9	Rear View Camera and Backup Sensor	X			
10.8.10	LCD display	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
10.8.11	Back-up Alarm	X			
10.8.12	Power Windows	X			
10.8.13	Durable, easy to clean and comfortable seating	X			
Bed Frame					
10.9.1	The COLT vehicle shall have a bed frame that can accommodate all Contractor-provided equipment cabinets and other required components.	X			
Exterior Features					
10.10.1	Any COLT exterior surface, including cabinets or storage boxes shall be galvanized, painted, or otherwise protected from the weather and corrosion protection.	X			
10.10.2	All attaching hardware shall be stainless steel unless otherwise specified by the User Agency.	X			
10.10.3	The COLT shall have external LED Lighting around the perimeter of the vehicle, capable of illuminating up to 25 feet away from the COLT. The top of the vehicle shall also be lighted such that any work can be performed on the mast at night.	X			
10.10.4	The COLT shall meet Federal Motor Carrier Safety Adminstration's (FMCSA's) requirement for conspicuity markings for commercial motor vehicles.	X			
10.10.5	Bumpers shall be constructed of metal, attached to vehicle frame, and bumper shall be strong enough to push a disabled vehicle without bending.	X			
Outriggers and COLT Stabilization					
10.11.1	The COLT shall have stabilizing outriggers that support 110% of the weight of the COLT System under stressed load conditions, including 60 mph winds.	X			
10.11.2	The COLT shall have a red indicator light in the tractor cab overhead and an audible warning in the cab whenever the outriggers are not stowed and the parking brakes are released.	X			

ENCLOSURE

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
10.11.3	The COLT shall have a fully automatic hydraulic vehicle leveling system.	X			
10.11.4	The COLT shall have outriggers.	X			
10.11.5	The COLT shall have multiple position outriggers.	X			
10.11.6	The COLT shall have four (4) outrigger Jacks and four (4) 18” x 18” x 1” Jack Pads with handles.	X			
COLT ENCLOSURE					
Shelter Size					
11.1.1	The COLT enclosure shall be NEMA 3R compliant.	X			
11.1.2	Contractor shall provide 19” equipment racks that are sized to house the equipment provided by the Contractor and by AT&T as well as appropriately sized racks to house batteries.	X			
11.1.3	Contractor shall provide a shelf for the rack for the AT&T-provided eNodeB and Cradlepoint Modem.	X			
11.1.4	The COLT shelter size shall be at least 16′ L x 8′ W x 8’ H.	X			
Floor					
11.2.1	The COLT floor structure design must incorporate an Equipment Mounting System for racks, cable trays, and cabinets.	X			
11.2.2	The COLT floor structure design must incorporate an Anti-Slip Floor Coating.	X			
11.2.3	The COLT floor structure design must incorporate an Anti-Static Floor Coating.	X			
11.2.4	The COLT floor structure design must incorporate at least 500-lb/sq. ft. Floor Load.	X			
Roof					
11.3.1	The roof of the equipment enclosure shall be capable of supporting the weight one satellite antenna dish in addition to the weight of two (2) people.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
11.3.2	Contractor will provide roof-mounted solar panels that will provide sufficient power to retain a full-battery charge during non-operational periods. The roof shall have solar panel mounts that shall be of sufficient strength to hold the panels in place at 100 mph vehicle speeds.	X			
11.3.3	The roof shall have an outdoor storage cabinet, capable of containing (5) omnidirectional antennas. Antennas will be no more than 6 feet long.	X			
11.3.4	Contractor shall provide and install roof mounted antennas and Radio Frequency (RF) cables for use with wireless routers to be provided by the LA-RICS Authority and/or the User Agency. The antennas shall be provided in two separate radomes with each radome providing antennas that support the bands specified in Sections 11.3.4.1, 11.3.4.2, and 11.3.4.3, and with each having its own cable ending with a SMA male connector that will be routed from the roof to inside the equipment enclosure with three (3) feet of excess length inside the enclosure. The two radomes will be installed in a way to maximize their separation to maximize MIMO performance. Within each radome, the antennas shall have sufficient isolation and out-of-band rejection to ensure proper operation of 4G/5G, Wi-Fi, and positioning technologies. Each of the two radomes shall include a minimum of : 1. Two (2) antennas each covering all 3GPP defined LTE bands, including those between 600 MHz and 3,800 MHz 2. One (1) antenna covering GPS and GNSS bands, 1565 to 1608 MHz 3. Two (2) Wi-Fi bands at 2.4 GHz, 4.9 GHz, and 5.8 GHz (2,400 to 2,500 and 4,900 to 5,900 MHz) one of these antennas will be vertically polarized, and the other will be horizontally polarized	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
11.3.5	The COLT shall have external penetration for future installation of three (3) cables, ½" in size.	X			
COLT EQUIPMENT					
Heating, Ventilation, and Air Conditioning (HVAC)					
12.2	The COLT enclosure shall be climatized by an automated, redundant (with lead/lag controller), temperature and humidity controlled HVAC system according to the specifications of all components within the COLT enclosure plus an additional 10,000 BTU/hr additional heat and while keeping the COLT enclosure within the temperature and humidity levels of all electrical components.	X			
12.3	The HVAC system shall be rated for heavy duty, continuous operation.	X			
12.4	The HVAC system shall be designed and implemented to optimize air distribution and circulation throughout the COLT enclosure.	X			
Grounding					
12.5.1	The COLT shall comply with all grounding requirements as applicable.	X			
12.5.2	The COLT shall have a Main Ground Bar (Exterior).	X			
12.5.3	The COLT shall have an Equipment Ground Bar (Interior).	X			
Telecom Panel					

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
12.6.1	The COLT shall have weather proof Telco panel that is pretreated with fire stop.	X			
Power					
12.7.1	The COLT shall have both weatherproof internal and external GFI service receptacles	X			
12.7.2	The COLT shall have a 50 amps 4000 watts female twist lock power receptacle with cover. Contractor shall include a 50 ft double male ruggedized powersealed cord that matches the receptacle.	X			
12.7.3	The COLT shall have weather proof lighting with emergency backup ballast to light the infrastructure portions of the COLT. Each cabinet shall be interior lit.	X			
12.7.4	The COLT AC Distribution Panel shall have at least a 120/240V 1 phase 100A 40 Position 3-Wire Distribution Panel and be weather proof.	X			
12.7.5	The COLT shall have Automatic Transfer Switch.	X			
12.7.6	The COLT AC Distribution Panel shall have NEMA 3R Enclosure.	X			
12.7.7	The COLT AC Distribution Panel shall have Surge Protection with Alarm.	X			
12.7.8	The COLT AC Distribution Panel shall have Cam Lock Connections for Alternate Source.	X			
12.7.9	Contractor shall provide at least two 40' or more shore power cables with Cam-locks.	X			
Generator and Fuel Tank					
12.7.10.1	The COLT shall have a generator and fuel tank sized to provide at least 48 hours of operation at full rated load, 100% duty.	X			
12.7.10.2	Generator shall support both 120V and 240V at 80 amps.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
12.7.10.3	The COLT generator shall have an auto start and hour meter.	X			
12.7.10.4	The COLT generator shall be in an integrated sound attenuated enclosure.	X			
12.7.10.5	The COLT generator shall have a dedicated fuel tank.	X			
12.7.10.6	The outlet from the tank shall be equipped with a readily accessible and clearly visible shut-off valve adjacent to the tank. The valve shall be labeled "Fuel Tank Shut-Off". No reserve feature shall be included in the tank.	X			
12.7.10.7	Both fuel level sending units shall be readily accessible for easy removal without removing the fuel tank or cutting holes in the body. An easily removable access panel is acceptable.	X			
12.7.10.8	The tank shall have a tank filler that extends sufficiently high to prevent fuel from being spilled when vehicle is operating or parked on a 32 percent grade, or 9 percent side slope, and shall permit a rapid filling of the tank without airlocks. The tank shall be provided with adequate venting. Replacement fuel caps shall be readily available through local retail outlets. Cast Products, or equal, fuel fill pockets with spring loaded polished aluminum or stainless steel fuel tank fill doors shall be provided.	X			
12.7.10.9	The fuel tank shall be equipped with a built-in drain sump so located that in a level position all moisture and foreign material shall be collected for draining. Contractor shall provide the sump with a readily accessible 3/4" brass drain plug.	X			
12.7.10.10	The fuel tank shall be mounted with insulated straps that encircle the tank in such manner as to prevent damage to the tank from torsion and flexing of the frame and to permit ready removal for cleaning and repairs.	X			
12.7.10.11	Generator exhaust shall be routed outside of the COLT enclosure and high enough such that personnel working around the vehicle will not be exposed to exhaust fumes.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
12.7.10.12	The COLT generator shall have access to Vehicle fuel tank as ancillary fuel feed but shall not draw on the vehicle fuel tank below 25% of its capacity.	X			
12.7.10.13	The COLT shall have an exterior generator plug for an ancillary generator.	X			
12.7.10.14	The COLT shall have a generator tank fueling neck.	X			
12.7.10.15	The COLT shall have an automatic transfer switch. The transfer switch will automatically switch between generator and shore power with a preference for shore power.	X			
12.7.10.16	The automatic transfer switch will only be utilized if shore power is connected. The ATS will detect loss of commercial power and will automatically start the generator and switch to generator power.	X			
12.7.10.17	The generator will be equipped with an LCD controller, and 25% and 50% alarm stem.	X			
Power System					
12.7.11.1	The power system shall be capable of providing power to all specialty components (outside of the 12 VDC power systems for the base vehicle operation) from any of the three following sources: shore, generator, or battery.	X			
12.7.11.2	The power system shall convert between AC and DC to accommodate the power requirements of each component. As such, the power system shall include at least one (1) 2 kW inverter that converts -48 VDC (battery power) to 120 VAC and at least six (6) 2 kW rectifiers (including one hot standby spare) capable of converting 120 VAC to -48 VDC (shore or generator power).	X			
12.7.11.3	The rectifiers and inverters shall be capable of achieving their respective loads of all components identified in these specifications.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
DC Breakers and Fuses: **The COLT power system shall have at least the following Breakers and Fuses**					
12.7.12.1	DC Breakers: Two 50A, One 30A, Two 10A	X			
12.7.12.2	DC Breaker Spares: (1) 10A, (1) 30A, (1) 50A	X			
12.7.12.3	Fuses: provide appropriate fuses for each component	X			
Batteries					
12.7.13.1	The COLT power system shall have battery capacity sufficient to maintain full-load COLT operation (for all AC and DC powered components) for four (4) hours. The battery system shall support the power requirements of Requirement Nos./Reference Nos. 12.7.11.1 and 12.7.12.2. HVAC may be excluded from battery operation but may run from vehicle's engine.	X			
Alarm Panel (No Current Dry Contacts)					
12.8.1	The COLT shall have an alarm panel and support external contact closures for at least the following items: 1. Smoke Alarm 2. Intrusion Alarm 3. Hi & Low Temperature Alarms	X			
12.8.2	Alarms shall be audible and alarm sound and volume shall be configurable per alarm type.	X			
Equipment Enclosure					
12.9.1	The COLT shall have an interior layout, with a chair and a desk, that enables at least one (1) person to work comfortably within a work space.	X			
12.9.2	The workspace desk COLT shall be at least 5'L x 3'W	X			
12.9.3	The workspace chair shall be stored away securely such that it does not move when the vehicle is in movement.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
12.9.4	The COLT shall have an interior layout that supports multiple cabinets for equipment in the enclosure as well as the Generator, battery strings, power equipment and weather protected connection to the external portion of the enclosure to reach external equipment such as satellite, the mast, and antennas.	X			
12.9.5	Equipment cabinets shall be listed as NEMA 3R rated weather proof communications cabinet at a minimum.	X			
12.9.6	The COLT shall have a cable tray.	X			
12.9.7	If required, the COLT shall have subfloor mounted cabling trays under the raised floor.	X			
12.9.8	All COLT interior cabling shall be dressed using cable tie strings.	X			
12.9.9	The COLT will have separate storage cabinets to store documents and tools.	X			
Electronics					
12.10.1	Contractor shall provide and securely fasten on a rack shelf inside the COLT enclosure one (1) satellite equipment controller, and (1) BUC power supply corresponding to the Contractor-provided Model 1278 Mobile VSAT 1.2m Motorized Transportable Vehicle-Mount Antenna.	X			
12.10.2	Contractor shall also securely install AT&T provided FRMZ Components.	X			
BACKHAUL					
Fiber					
13.1.1	The COLT shall have a external fiber patch panel.	X			
13.1.2	The external fiber patch panel shall be connected with optical fiber to the equipment enclosure space.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
13.1.3	The COLT shall include an external storage space for a minimum of 300 feet of optical fiber cable for connection to an external fiber service	X			
13.1.4.1	The COLT shall have a minimum of 300 feet of single mode optical fiber: The 300' fiber cable shall be single mode fiber pair with appropriate connectors to match the patch panel provided.	X			
13.1.4.2	OS2 LC LC AnyAngle Fiber Patch Cables or similar - Plenum Duplex Single-Mode Fiber Jumper with Corning 9/125um core/cladding. AnyAngle flexible boot bends and stays in any direction up to 90 degrees. Plenum OFNP, water and UV resistant, yellow, 2.0mm fiber patch cable. Reliable 1/10/40/100 Gigabit Singlemode cable.	X			
13.1.4.3	OS2 LC LC Armored Fiber Patch Cables or similar - Duplex LC to LC Singlemode 9/125 jumper cord. Terminated with small form factor (SFF) ceramic ferrule LC-LC patch connectors with lc duplex clips included. A single-mode fiber patch cable for durable, reliable and fast data transmission. Inside the crush resistant armor wrap is an OFNR, yellow colored, 2.0mm outer diameter, PVC fiber jumper with zip-cord.	X			
13.1.4.4	Fiber Jumpers required for FRMZ Components and services will be specified by AT&T.	X			
13.1.4.5	Ten (10) fiber cables of varing lengths from 2 ft to 20 ft fiber patch cords	X			
Satellite					
13.2.1.1	Contractor shall provide and install: Satellite Model AvL 1278 Ku-Band Mobile VSAT 1.2m Motorized Transportable Vehicle-Mount Antenna on top of the COLT enclosure	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
13.2.1.2	Contractor shall provide and install: AvL ACU AAQ satellite antenna controller with one button auto-acquisition of selected satellite, mounted on a rack inside the enclosure	X			
13.2.1.3	Contractor shall provide and install: AVL 1RU 55W 48V BUC Power Supply	X			
13.2.1.4	Contractor shall provide and install: The satellite dish shall be connected to the electronics in the shelter via a patch panel (Roxtec port or similar) mounted on the roof, such that the dish can be easily removed from the roof when necessary	X			
13.2.2	The satellite antenna shall be installed in a location that provides a 360 degree clear view of the geostationary satellites without obstruction from the COLT components	X			
13.2.3	The satellite antenna shall be equipped with an auto-alignment capability that is capable of positioning the satellite antenna based on signal levels to within 0.1 degree of accuracy.	X			
MAST					
Pneumatic Mast					
14.1.1	COLT shall have at least a 60-foot pneumatic heavy duty mast that has a locking collars, rotating base, with an overall load capacity of all mast based components but no less than 450-lbs.	X			
14.1.2	The COLT mast shall be capable of sustaining winds in excess of 100 mph (including all mast based components)	X			
14.1.3	The COLT mast assembly will also contain a complete guy system/kit for use in high winds and other required mast stabilizing situations.	X			
14.1.4	The mast shall be made of stainless steel hardware to ensure protection from corrosion.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
14.1.5	Contractor shall provide the mast with a warning system that automatically activates a 3/4" minimum flashing red light when the vehicle ignition is in the "ON" position and the mast is not fully retracted. The system shall activate a 120 dB buzzer when the ignition is in the "ON" position and the parking brakes are released.	X			
14.1.6	Contractor shall also provide a high voltage, electromagnetic and electrostatic field detection system to automatically stop mast extension when it senses overhead powerline with "look-up" light and other capabilities and performance equivalent or better than the Will-Burt D-TEC Safety System.	X			
14.1.7	Contractor shall provide and install a L-810 LED tower obstruction light system on the antenna mounting system that complies with Federal Aviation Administration (FAA) regulations. Obstruction light system will include power cables interconnected with the COLT power system. Power cable associated with the obstruction light shall be permanently installed as coiled hose that compactly retracts around nested mast and neatly fits around extended mast.	X			
14.1.8	Contractor shall provide a bottle of mast lubricant, 16 ounces or more.	X			
Mast Antenna Mounting System					
14.2.1	The mast shall have a removal antenna connector section that supports from a single sector up to a three sector antenna mounting system as well as other canister antenna attachments.	X			
14.2.2	This functional antenna connector shall also employ a simple methodology to change mast antennas (easily deployable and changeable).	X			
14.2.3	The mast and all its loading, including antenna attachments, and cables, shall be able to withstand wind speeds of 100 mph or higher.	X			
14.2.4	The COLT mast shall employ a method to maintain directional Azimuth control.	X			
Mast Air Compressor					

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
14.3.1	The mast air compressor system shall have all the appropriate gauges, controls, check valves and pressure switches to ensure error free deployment and retraction of the mast.	X			
Mast Weather Protection					
14.4.1	The mast shall also have a protective weather cover, installation and operation manual and any other protective accessories to ensure the proper care and functioning of the mast.	X			
14.4.2	The COLT shall have a mast valve control labels.	X			
14.4.3	The COLT shall have mast drain labels at base of mast.	X			
14.4.4	The COLT shall have mast air controls on the roof.	X			
Mast Based Components					
14.5.1.1	Contractor shall provide and install antennas, cables, and connectors as follows: LTE Antennas: two omnidirectional antennas less than 4 feet long and with 6dBi gain or higher	X			
14.5.1.2	Coaxial cables that connect with mast-top installed antennas with RF equipment in the Equipment Enclosure shall be equal to Times Microwave LMR-400 or better and terminated with 7/16" Din Bulkhead Connectors with Weather Caps connectors in the Equipment Enclosure.	X			
14.5.1.3	All cables with connected antennas shall achieve a minimum 20 dB return loss and Passive Intermodulation (PIM) of -140dBc				
14.5.2.1	In addition, Contractor shall dimension the mast loading to allow future equipment as required by the system growth: 3 to 4 feet omnidirectional antennas: two (2) transmit and one (1) receive	X			
14.5.2.2	Three (3) RF cables, ½" superflex (LMR-400 or better)	X			
14.5.2.3	Three (3) 12dBi panel antennas, no longer than four (4) feet	X			
EXTERIOR CABLE CONNECTIONS					
Mast RF Cable Connections					

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
15.1.1.1	Radio Cable Connectors Options Enclosure housed RF equipment. The COLT shall have an external weatherproof bulkhead RF Cable connector cabinet wave guide entry that enables adding RF cables from equipment enclosure to tower antennas to complete connection to enclosure internal eNodeB (and other) equipment. The COLT shall have at least 9 to 12 weatherproof bulkhead RF Jacks with covers.	X			
15.1.1.2	Externally mounted RF equipment The COLT shall have at least 3 weather-proof bulkhead Fiber Connectors enabling connection to tower mounted RF equipment to enclosure telecommunications equipment.	X			
Shore Power					
15.2.1	The COLT shall have an external weatherproof bulkhead power connector cabinet.	X			
15.2.2	All external outlets shall have Woodhead/FD outlet boxes with Woodhead Watertite #65W47 single flip lids and NEMA L515 female receptacles or equal.	X			
15.2.3	All watertite plugs and connectors shall meet NEMA Type 4X requirements when properly mated to its corresponding watertite component.	X			
15.2.4	Mounting locations and installation of 110 VAC related components to be determined and approved by the LA-RICS Authority during design review.	X			
15.2.5	The COLT shall have at least one (1) external generator weatherproof bulkhead connection jack.	X			
Backhaul					
15.3.1	The COLT shall have an external weatherproof bulkhead connector cabinet.	X			
15.3.2	The COLT shall have at least 8 RJ45 weatherproof bulkhead jacks.	X			
15.3.3	The COLT shall have at least two (2) fiber connection weatherproof bulkhead jacks.	X			
Monitoring System					

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
16.1	Contractor shall provide a monitoring system that will have both local and remote operational status monitoring and local and remote management capabilities.	X			
16.2	The monitoring system shall have the storage capacity to retain locally at least six (6) months of alarmed events and user activity logs.	X			
16.3	The COLT enclosure shall contain a monitoring system server that can be connected externally to a screen, a keyboard, and a PC mouse.	X			
16.4	The monitoring system shall include visual and audible alarm features to immediately notify COLT maintenance personnel when a condition occurs.	X			
16.5	Contractor shall install an anemometer on the mast that will be connected to the monitoring subsystem and will send alarms when wind speed exceeds 40 miles per hour.	X			
16.6	The monitoring system will provide Key Performance Indicators (KPIs) of the eNodeB, the satellite modem, and any electronic equipment that supports Simple Network Management Protocol (SNMP).	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
16.7	At a minimum, the monitoring system will monitor and report the following: 1. Smoke and/or fire alarms; 2. Indoor temperature and alarms; 3. Outdoor temperature; 4. HVAC alarms; 5. Cabinet intrusion; 6. Exterior motion detector alarms; 7. Interconnect equipment; 8. High/Low battery voltage for each battery; 9. Rectifier/inverter failure; 10. High/low battery temperature for each battery; 11. Low/high -48 VDC; 12. All rectifier alarms; 13. Low/high temperature of the -48 VDC system; 14. Generator fuel level; 15. Generator low fuel alarms; 16. Generator fuel overfill alarms; 17. Generator battery alarms; 18. Generator online alarms; 19. Generator high temperature alarms; 20. Generator over crank alarms; 21. Generator over speed alarms; 22. Generator low oil alarms; 23. Generator transfer switch status; 24. AC surge suppression alarm indication; 25. Voltage Standing Wave Ration (VSWR) on output of the combining system;	X			
ADDITIONAL COLT REQUIREMENTS					
17.1	The COLT shall have at least six (6) safety cones.	X			
17.2	The COLT shall have at least one (1) tool kit.	X			
17.3	The COLT shall have at least two (2) fire extinguishers.	X			
17.4	The COLT shall have at least one (1) eye wash kit.	X			
17.5	The COLT shall have at least one (1) first aid kit.	X			
17.6	The COLT shall have at least one (1) CO2 sensor.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
17.7	The COLT shall have at least one (1) grounding kit.	X			
17.8	The COLT shall have at least two (2) safety vests [one (1) medium size and one (1) large size].	X			
17.9	The COLT shall have at least two (2) battery rechargeable flashlights, one (1) pick, and one (1) shovel.	X			
17.10	The COLT shall have at least one (1) full set of instruction/operations manual including wiring & plumbing schematics, dimensional overviews, guying footprint and component warranty information.	X			
COLT FUNCTIONAL TESTING AND ACCEPTANCE					
18	A test plan shall be developed by the Contractor and approved by the LA-RICS Authority to test all the major functions and components of the COLT to ensure proper functionality and adherence to all specified requirements and regulations either written or implied. The following list are the minimum required major functional and component tests to be developed and approved. All other items that have to meet specific requirements and local, state, or federal regulations shall also be tested or show documented proof of certified test completions and adherence to those regulations. All COLT tests shall be witnessed by LA-RICS Authority, any of its designated agents, and/or User Agency personnel. LA-RICS Authority shall be notified a minimum of twenty-one (21) calendar days in advance of these tests and shall coordinate with the Contractor to determine the appropriate date, time, and location that the tests to be conducted. The Contractor shall operate the COLT throughout all tests. The Contractor shall provide all raw test results and test summaries in its provided documentation to the LA-RICS Authority within one (1) week of test completion by the Contractor.	X			
Component Functional Testing					

ENCLOSURE

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
18.1	Component Functional Testing shall demonstrate compliance with all functional specifications in this Appendix B.1 (COLT Specifications). The Contractor shall provide a detailed test plan for each major component that tests its primary functionality and document test past to provide adherence to specifications and regulations and review with LA-RICS Authority for modifications, changes, and approval. Any items not passing these tests will be put onto a completion check list to be followed up on with resolutions and timeframes for those resolutions to be rectified.	X			
18.1.1	**COLT Performance Tests** The COLT Performance Test shall test all performance specifications in this Appendix B.1, (COLT Specifications).	X			
18.1.2	**Vehicle drive test** An acceptance road test shall be conducted with the COLT loaded to the manufacturer's certified weight rating. A continuous run of fifty (50) miles or more shall be made under any or all of the aforementioned operating conditions, during which time the COLT shall show no loss of power or overheating. The transmission, drive shaft or shafts, and rear drive axle shall run quietly and be free from abnormal vibration or noise throughout the operating range of COLT.	X			
18.1.3	**Vehicle set up test** A complete demonstration of how the COLT, mast, satellite dish, network, alarm and monitoring system operate shall be conducted by the Contractor during the on-site inspection of the completed COLT with the LA-RICS Authority and/or User Agency.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
18.1.4	**Mast and Auto-Leveling (Stabilization) Struts Performance Test** 1. A minimum of two (2) operations (raising and lowering the mast and leveling/stabilizing the vehicle) shall be conducted at normal hydraulic operating pressure. 2. The mast and stabilization struts shall be capable of operating continuously (i.e., in a raised mast configuration or in a leveled configuration) for a minimum of twenty-four (24) hours without hydraulic oil overheating.	X			
18.1.5	**Generator, Shore, and UPS test** 1. The automatic transfer switch (ATS) shall be tested to confirm that the generator auto-starts and the vehicle power systems switch to generator power after shore power is lost. 2. The ATS shall be tested to confirm that the generator turns off and the vehicle power systems switch to shore power after shore power is restored. 3. The generator will be tested for manual turn-on and shut-off under a full load. 4. The power system will be tested to ensure the battery backup supplies power to all systems in the event of loss of generator and shore power for a minimum of 30 continuous minutes.	X			
18.1.6	**Passive InterModulation (PIM) and Sweep test:** The lines and antennas will be tested for PIM and return loss on all RF lines and connectors with supplied antennas attached and achieve the performance specifications.	X			
18.1.7	**Satellite connectivity test** The satellite system will be tested for connectivity to the satellite network and verify throughput, Commited Information Rate (CIR) and Grade of Service (GoS).	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
18.1.8	**eNodeB and Connectivity Test to AT&T FirstNet FRMZ** The eNodeB will be tested and connectivity will be verified between a test mobile unit and the FirstNet Core. Contractor will support testing of connectivity, and address any issues identified with Contractor provided equipment.	X			
18.1.9	**Coverage test** The mast will be deployed with antenna attached in flat uncluttered environment and a drive test will verify coverage and resulting coverage test plot will be provided to the LA-RICS Authority.	X			
Final acceptance testing					
18.2.1	Final acceptance testing will be complete when all functionality tests are complete with no check list items open and passed. Final acceptance will include all documentation delivered and 100% accurate with no missing information.	X			
18.2.2	In the event the COLT fails to meet the test requirements on first trials, second trials may be made at the option of the Contractor within thirty (30) calendar days of the first trial. Such trials shall be final and conclusive, and failure to comply with these requirements may be subject to liquidated damages as stipulated in Section 32.0 of the Contract.	X			
TRAINING					
19.1	Contractor shall provide training to the LA-RICS Authority and/or User Agency personnel and technicians in the operation and maintenance of the COLT.	X			
19.2	The training shall be completed not more than three (3) weeks before the deployment tests, unless otherwise agreed upon by the Contractor and the User Agency, so that the deployment tests shall provide hands on experience to the students.	X			
19.3	The Contractor shall develop a training package with full curriculum and submit them to the LA-RICS Authority for review and approval 30 days after the Effective Date or a date agreed upon by the Contractor and the LA-RICS Authority.	X			

ENCLOSURE

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
19.4	The Contractor's training package shall include the following: 1. Suggested number of participants for each class; 2. The prerequisites for all participants; 3. The length of each class in hours; and 4. The total number of trainer hours proposed.	X			
19.5	The Contractor's training package shall describe the type of refresher training recommended (e.g., updated user training, changes to system configuration).	X			
19.6	Training materials (both hardcopy and electronic) shall be provided no later than three (3) weeks prior to the start of any training course, unless otherwise agreed upon by the Contractor and the User Agency.	X			
19.7	Training materials shall be customizable based on the functionality being sought by the LA-RICS Authority or User Agency.	X			
19.8	All training courses shall be scheduled by the Contractor and User Agency and approved by the LA-RICS Authority.	X			
19.9	These training requirements are included primarily to provide the LA-RICS Authority and/or the User Agency the opportunity to train its end users and technicians in the operation and maintenance of the COLT. However, the Contractor will include any necessary changes that are the result of providing an integrated solution.	X			
19.10	The training will provide a computer database tracking mechanism for the training received by each student. The minimum information tracked shall include students name, agency, type of training and hours of training received, by subject and cumulative training time.	X			
19.11	All training will be conducted at a location approved by the LA-RICS Authority and/or User Agency (any training that requires offsite participation shall be specifically noted).	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
19.12	The training will be flexible enough to allow the LA-RICS Authority and/or User Agency to make adjustments to the participants or curriculum to achieve the greatest benefit for the training hours provided. All training shall be conducted as close to "go live" dates as possible, except where noted in the project schedule.	X			
19.13	Training materials (both hardcopy and electronic) shall be provided to the LA-RICS Authority and/or User Agency a minimum of three (3) weeks prior to the start of any training course.	X			
19.14	The Contractor shall provide train the trainer style training for end users (e.g., Police Officers, Fire Fighters, Dispatchers and Dispatch Supervisors).	X			
19.15	A full training curriculum is required for Engineering and Technical personnel. Refresher training is not acceptable for initial COLT introduction.	X			
19.16	All training and materials shall be subject to review and approval by the LA-RICS Authority prior to use or distribution by the Contractor.	X			
19.17	The Contractor shall recommend the number and type of training sessions to ensure that a sufficient number of personnel are trained for COLT system use and maintenance.	X			
19.18	The LA-RICS Authority may assist with providing classroom space for training sessions. The Contractor shall be responsible for providing all training courses within these facilities.	X			
19.19	The Contractor shall provide all instructional materials, media presentation devices, presentation media, lesson plans, and course instructors.	X			
19.20	Student to instructor ratios for all training sessions shall not exceed a ratio of ten (10) students to one (1) instructor unless approved by the LA-RICS Authority and/or User Agency.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
19.21	In addition to formalized training courses, the Contractor shall list any electronic utilities (e.g., self-guided tutorials) that provide an on-line or off-line training environment. The nature of such utilities shall be presented, along with the content of such courses. These utilities will mirror the installed operations by using live data wherever possible.	X			
19.22	All manuals, handouts, and other printed materials used during the training shall become the property of the LA-RICS Authority and/or User Agency.	X			
19.23	The LA-RICS Authority shall be granted the right to reproduce unlimited copies of the training materials for use by LA-RICS Authority, its Member and Users.	X			
19.24	If any specialized test/diagnostic equipment is required or proposed to support the COLT, the Contractor shall include training for this equipment.	X			
19.25	Contractor shall include hands-on training, which includes simulations of common failures and maintenance processes.	X			
19.26	Contractor shall provide all equipment required for hands-on training.	X			
19.27	All courses shall be professionally video recorded by the Contractor and become LA-RICS Authority property for the purpose of refreshment course and/or new training.	X			
19.28	The Contractor will include a training outline and a copy of all the standard documentation (user, administrator, installer guides, etc.) for all components (hardware, firmware, and software) proposed.	X			
19.29	Contractor will recommend the number and type of training sessions to ensure that a sufficient number of personnel are trained for each class.	X			
19.30	Contractor shall provide pricing for additional training as requested by the LA-RICS Authority.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
19.31	Contractor will provide training program on the basic installation and troubleshooting of the Contractor-provided equipment to include, but not be limited to: COLT overview, individual Component troubleshooting and repair at module level, COLT Satellite and antenna alignment and adjustment, COLT component configuration, and preventative maintenance. The Contractor will identify any additional training deemed necessary to properly maintain and restore the COLT in a timely matter as determined by the LA-RICS Authority. Training will include use of the live COLT.	X			
19.32	The training program shall include but not be limited to the course modules presented below and others as deemed appropriate by the Contractor:	X			
19.32.1	COLT Overview;	X			
19.32.2	COLT infrastructure and ancillary equipment operation and maintenance (including equipment for environmental control system, backup power system, fuel monitoring system, and FAA obstruction lighting control).	X			
19.32.3	Component Provisioning	X			
19.32.4	eNodeB Field Maintenance;	X			
19.32.5	COLT Systems Operations (Fault management, hardware/software management, performance management, configuration);	X			
19.32.6	Troubleshooting failures;	X			
19.32.7	Performance Management and Troubleshooting Performance Issues (including database consistency checks);	X			
19.32.8	Course Materials: The Contractor will provide hard copy and soft copy course materials in sufficient quantities to satisfy participant requirements.	X			

Reference No.	COLT Requirements	COLT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant? (Bidder shall mark column with X)		Bidder Comments
			YES	NO	
19.32.9	The LA-RICS Authority and/or User Agency may video tape training session and post such training video, together with softcopies of the training on LA-RICS Authority and LA-RICS Authority Member web sites for use of personnel. Personnel will be authorized to download and make personal copies of these materials.	X			
19.32.10	Certification Program: The Contractor will provide certification of course completion to all course participants. A formal Certification Program will be established for LA-RICS Authority personnel to achieve sufficient skills and expertise to fully maintain the COLT.	X			
19.32.11	Technician Training: The Contractor will train ten (10) Authority technicians on eNodeB, System Management and other key COLT Components, Subsystems and other COLT elements to a level of quality and certification the Contractor would require for its own technicians.	X			
SCHEDULE					
20	Acceptance testing, deployment testing, training and delivered documentation shall be completed between 120 and 180 calendar days after contract award, or a date specified by the LA-RICS Authority.	X			

ENCLOSURE

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
COPT REQUIREMENTS					
SPECIAL INSTRUCTIONS					
1.1	The Contractor shall guarantee the per-unit contract price(s) pursuant to Exhibit B (Pricing Schedule) for a period of twenty four (24) calendar months from the Effective Date of the Contract. The Contractor shall allow the same price(s) to a requesting LA-RICS Authority Member Agency.	X			
1.2	The delivery date of the completed unit(s), shall not exceed 160 days from the Effective Date or date agreed upon by the Contractor and the LA-RICS Authority and/or LA-RICS Authority Member Agency (collectively, "User Agency").	X			
WARRANTY					
2.1	The Contractor shall provide a minimum warranty of five (5) year/100,000 mile warranty for the entire COPT (including vehicle and all specialty equipment), barring accident damage, abuse, or routine maintenance items, i.e., tires, brakes, windshield wipers, etc. or, the original equipment manufacturer's warranty, whichever is greater.	X			
2.2	The vehicle warranty work will be performed at a dealership in Los Angeles County (County).	X			
2.3	Warranty period will start on the day the COPT is put into service by the User Agency, not the day of COPT delivery. Delayed warranty start not to be more than six (6) months from COPT final delivery date.	X			
2.4	Future installation of equipment, installed according to manufacturer guidelines, by the LA-RICS Authority or designee shall not void warranty.	X			
2.5	Warranty card to be delivered to User Agency.	X			

ENCLOSURE

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
2.6	All COPT components substituted or changed upon Effective Date, and any component deviations initiated at the discretion of COPT manufacturer shall be warranted by the manufacturer for parts replacement and parts installation. The warranty shall be effective from the day the COPT is put into service by User Agency.	X			
	EMISSION STANDARDS				
3.1	Manufacturer's Standard Equipment and all devices necessary to comply with the Federal Motor Safety Standards will be included in the COPT.	X			
3.2	COPT shall comply with all Federal Emission Standards on crankcase, exhaust, and applicable California State laws on crankcase and fuel emissions.	X			
	GENERAL SPECIFICATIONS AND STANDARDS				
4.1	All equipment furnished will be subject to the approval of the User Agency.	X			
4.2	The vehicle's body, finish, and fittings shall be the latest model. The vehicle provided shall be new and not have been used in a demonstration or other service, and shall be factory standard in all respects and not in conflict with any specification requirements.	X			
4.3	Trade names mentioned in these vehicle plans and specifications are not restrictive and are given only to indicate the type of material which will be acceptable. When furnishing other than these trade name items, they shall be of equal or better quality and shall be approved by User Agency.	X			
4.4	All deviations or component changes shall be approved by the User Agency.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
4.5	One (1) copy of the Maintenance Service Manual including electrical wiring diagrams shall be furnished by Contractor within 45 days of the receipt of the Purchase Order or payment will be delayed. In addition, one (1) copy of all technical bulletins pertaining to the COPT shall be provided in a timely manner.	X			
4.6	Contractor shall furnish a Bill of Sale and title for the vehicle in the name of: Los Angeles Regional Interoperable Communication System (LA-RICS) Authority 2525 Corporate Place, Suite 100 Monterey Park, CA 91754	X			
4.7	Contractor shall provide bill of sale and title within fifteen (15) days verification of order. Verification is to be forwarded to the Contract Manager/Fleet Manager/equivalent of User Agency and LA-RICS Authority.	X			
4.8	Contractor to furnish invoice at time of delivery for each COPT received by User Agency.	X			
	DELIVERY				
5.1	COPT Vehicles will have the Contractor preparation service work, normally performed by the Contractor, completed before delivery.	X			
5.2	Contractor preparation shall include the removal of all window stickers, transport papers, etc., that are adhered to the windows or any other portion of all vehicles. Vehicles shall not be delivered with any type of license plate frame or placard identifying the Contractor's name or company information.	X			
5.3	The final delivery date of the complete order of COPTs may not be later than 160 calendar days after contract award, or a date agreed upon between the Contractor and the LA-RICS Authority.	X			
5.4	COPTs, upon acceptance test by the User Agency, shall be ready for service at the time of final delivery date.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
5.5	COPTs shall be delivered clean, with full tank of fuel, and batteries full and ready for immediate operation.	X			
5.6	User Agency personnel shall inspect all vehicles for compliance with these COPT Specifications. If defects are found requiring correction, it shall be the Contractor's responsibility to make the correction and return the COPT, accessory, or part back to the User Agency for inspection. All transportation to and from the designated delivery location shall be the responsibility of the Contractor until the vehicles are accepted by User Agency.	X			
5.7	All vehicles shall be delivered to a location designated by User Agency at the date and time agreed upon by Contractor and User Agency.	X			
COMPLIANCE WITH CODES AND STATUTES					
6.1	The complete vehicle shall in every respect, comply with and/or conform to, the latest editions of the State of California Motor Vehicle Codes, Federal Motor Vehicle Safety Standards, National Electrical Code Standards, Health and Safety Codes and provisions of the Occupational Safety and Health Act, and applicable NFPA requirements.	X			
6.2	THIS VEHICLE IS USED FOR RESPONDING TO EMERGENCY CALLS AND IS EXEMPT FROM THE REQUIREMENTS OF CALIFORNIA LAW FOR MOTOR VEHICLE POLLUTION CONTROL DEVICES AS PER SECTION 27156.2 OF THE CALIFORNIA VEHICLE CODE.	X			
6.3	It is the sole responsibility of the Contractor to advise the LA-RICS Authority and/or User Agency in writing of any conflicts between the requirements herein and the aforementioned Codes and Standards.	X			

ENCLOSURE

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
6.4	The Contractor shall secure all approvals, certifications and inspections from appropriate State and local authorities. Before the delivery of the vehicle the Contractor shall provide relevant paperwork demonstrating the vehicle is in road-worthy and safe driving condition and meets all legal requirements to be driven on California roads.	X			
INTENT OF SPECIFICATIONS					
7.1	It is the intent of these specifications to obtain a commercial medium-duty vehicle and related equipment that shall meet the construction and performance requirements reflected herein. The vehicle shall be conventional truck and not a cabover. For the purpose of distinguishing this vehicle from the COLT, this medium-duty truck, with its related equipment, is referred to as Cell On Pickup Truck (COPT) in this IFB.	X			
7.2	These specifications are intended to describe the type, size, and quality of the COPT and related equipment desired and to cover the furnishing and delivery to the User Agency of complete apparatus equipped as hereinafter specified.	X			
7.3	Nothing in these specifications is intended to prevent the use of systems, methods, or devices or equivalent or superior quality, strength, effectiveness, durability, and safety in place of those prescribed by these specifications.	X			
7.4	Minor details of construction and materials, where not otherwise specified, are left to the discretion of the manufacturer, who shall be solely responsible for the design and construction of all features.	X			
GENERAL TECHNICAL SPECIFICATIONS					

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
8.1	Contractor shall provide a pickup truck vehicle and other components that are part of the COPT no later than 160 calendar days after contract award, or a date specified by the User Agency. The base vehicle does not have to meet the normal definition of pickup truck. The LARICS Authority will accept any truck model up to a class 6 medium duty Cab and Chassis vehicle. The vehicle must be 4x4 vehicle and sized appropriately to handle the vehicle and equipment total load weight including the generator, batteries, LTE equipment, HVAC, mast, and cabinets.	X			
8.2	The COPT shall be capable of providing secure and reliable connectivity between a compatible FirstNet Ready device provisioned with a FirstNet SIM and the AT&T/FirstNet network infrastructure.	X			
8.3	Contractor shall be responsible for providing all COPT components required for a fully operational Long Term Evolution (LTE) coverage extension of the AT&T/FirstNet network except those components listed in Attachment A (FRMZ Components), and in the case of the FRMZ Components, Contractor shall be responsible for providing a vehicle host system capable of structurally containing those components, powering those components, and providing an environment that assures the continued operations of those components.	X			
8.4	Contractor shall be responsible for all the tasks in identified in these specifications such that the COPT System meets all the objectives outlined in Section 10, COPT Objectives, and satisfy all functional, performance, and scope of work elements in these COPT Specifications. All components provided by the Contractor, except the vehicle are referred in these COPT Specifications as COPT Support System. The vehicle, the COPT Support System, and FRMZ Components, together form the COPT System.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
8.5	The LA-RICS Authority and/or User Agency endeavors to complete its final design review of the COPT to ensure that the vehicle, components, etc. adhere to the LA-RICS Authority's requirements within seven (7) days from the date of submission of the final COPT design.	X			
8.6	Contractor shall include all user manuals, as-built documentation, and any other requested documentation at the time of initial vehicle delivery. The documentation includes one hard copy and one soft copy in PDF provided by the Contractor on a USB drive no later than seven (7) days from the Effective Date or a date specified by the LA-RICS Authority and/or the User Agency. Should the the LA-RICS Authority instruct the Contractor to perform additional work on the COPT, Contractor shall provide updated literature to contemplate the additional work to the LA-RICS Authority and/or User Agency within seven (7) calendar days of the work requested.	X			
8.7	If there is a conflict between codes, ordinance, regulations, standards, and these COPT Specifications, the most stringent requirement will govern. If there is a conflict within this COPT Specification, the most stringent requirement will govern.	X			
COPT OBJECTIVES					
9.1	COPT will connect to FirstNet/AT&T core from any location in Los Angeles County (e.g., Angeles National Forest, Rancho Palos Verdes, etc).	X			
9.2	COPT shall be capable of travel on any passable road within L.A. County. It shall be capable of off-road travel on dirt and gravel roads. It shall be capable of operating on roads eleven (11) feet in width or wider. All COPT systems and Components shall be capable of continued and sustained operation following travel on such roads.	X			
9.3	The maneuverability of the COPT shall exceed a comparably sized van and have a short wheelbase and tight turning radius without affecting the stability of the COPT	X			
9.4	COPT shall be drivable with basic Class C driver's license.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
9.5.1	COPT shall be able to support emergency response deployments with the following: Quick setup time with the ability to fully deploy the COPT with LTE service in 30 minutes under ideal weather conditions.	X			
9.5.2	Non or minimal technical knowledge required to setup COPT.	X			
9.5.3	Auto aligning satellite capability to connect the COPT to the FirstNet Evolved Packet Core.	X			
9.5.4	Weight distribution and outrigger/stabilizing struts to ensure stability of the COPT while mast is deployed.	X			
9.5.5	Pneumatic Mast deployment supporting variable deployment heights but will not require guy wires below 30 feet with wind speeds less than 30 mph, and with a net mast wind surface area less than 35 square feet.	X			
9.5.6	Mast attachable antenna mount for ease of deployment of multiple types of antennas.	X			
9.6	All COPT System Components will be new and unused at the time of installation.	X			
9.7	Firmware and software will be the same for all like devices at the time of Final COPT System Acceptance.	X			
9.8	All COPT System Components will be of current design and manufacture. The COPT System will not contain any Components not in current production or that is scheduled for discontinuance within five (5) years of the date of Effective Date.	X			
9.9	All software licenses will be a one-time cost.	X			
COPT VEHICLE SPECIFICATIONS					
Turning capability					
10.1.1	The COPTs turning capability will be equipped with an applicable factory steering assist system.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
10.1.2	The wheel base will be short enough to ensure appropriate turning radiuses. The turning radius shall not exceed 35 feet.	X			
Vehicle Carrying Capacity					
10.2.1	The weight rating of the vehicle shall be no less than the rating required for the vehicle to support 110% of the net weight of all equipment necessary to achieve the vehicle performance requirements herein, or 17,500 lbs. gross vehicle weight rating (GVWR), whichever is greater.	X			
10.2.2	The vehicle shall be able to contain all LTE and microwave cabinets, generator, battery backup systems, and any other equipment required by the COPT System.	X			
10.2.3	Contractor shall indicate the vehicle's gross combination weight rating (GCWR) and the excess carrying capacity that can be used by the future growth.	X			
10.2.4	The COPT suspension system shall be capable of supporting the vehicle and payload within the GVWR and GCWR ratings	X			
10.2.5	Suspension system ratings shall be provided to ensure compliance with GVWR and GCWR ratings.	X			
10.2.6	Front and rear axle ratings shall be provided to ensure compliance with the GVWR and GCWR ratings.	X			
10.2.7	The maximum overall height of the vehicle, including all apparatus, while the vehicle is in motion, shall not exceed thirteen (13) feet.	X			
10.2.8	The vehicle shall have an extended cab.	X			
Engine					

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
10.3.1	The COPT vehicle engine will be equipped with at least a Turbo Diesel rated at least 350hp @ 2,700 rpm and 700 lb.-ft of Torque @ 1,600 rpm. The engine shall be sized to ensure the vehicle can support all COPT equipment and achieve all performance requirements.	X			
10.3.2	The COPT engine compartment shall employ a heavy-duty cooling system for the engine systems.	X			
10.3.3	The COPT vehicle shall also have a minimum of 800 Watt engine block heater.	X			
Transmission System					
10.4.1	The COPT VEHICLE transmission systems will have at least 6-speeds with double overdrive and a heavy-duty automatic transmission. COPT shall include the following: 1. Front Axle, Front Driving {Dana Spicer 60-256} Single Reduction, 7,500-lb Capacity, with Hub Piloted Wheel Mounting 2. Rear Axle shall be Dana Spicer S16-130 with Single Reduction, 15,500-lb Capacity, 190 Wheel Ends Gear Ratio: 4.88	X			
10.4.2	The COPT VEHICLE transmission systems shall have a 4-wheel drive high/low range select shift from the interior of the vehicle.	X			
Electrical System					
10.5.1	COPT vehicle shall have an alternator rated at least at 140 amps.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
10.5.2	The COPT vehicle shall have at least 2 Maintenance-Free Batteries or more batteries with CCA (cold cranking amps) at 700 CCA or more.	X			
Brakes and Wheels					
10.6.1	The COPT VEHICLE brake system shall consist of Bosch Split System with Four-Channel ABS, Traction Control, Hydromax Brake Booster and Master Cylinder. COPT vehicle shall include: 1. Front and rear brake dust shields for Hydraulic Brakes 2. The parking brake shall be Bosch DSSA Type, 12" x 3", footoperated in Cab and differential mounted. 3. Front and rear brakes shall have hydraulic disc and quadraulic four 64mm diameter pistons.	X			
10.6.2	The COPT vehicle shall two (2) sets of rear wheels.	X			
10.6.3	The COPT vehicle shall have at least 19" heavy duty wheels front and rear.	X			
10.6.4	Front suspension shall have Parabolic Taper Leaf 7,500 lbs. with Shock Absorbers.	X			
10.6.5	Rear suspension shall have Vari-Rate springs with 15,500 lb. capacity.	X			
Tires					
10.7.1	The COPT vehicle tires shall have a radial design.	X			
10.7.2	If feasible, the COPT vehicle tire type will be run flat.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
10.7.3	COPT vehicle shall have two (2) front tires: Load Range H On/Off Road, 649 rev/mile, 75 MPH, All Position.	X			
10.7.4	COPT vehicle shall have four (4) rear tires: Load Range H On/Off Road, 649 rev/mile, 75 MPH, All Position	X			
10.7.5	The COPT vehicle tires shall be suitable for all weather conditions including for use on non-paved roads for the full Net Vehicle System weight.	X			
10.7.6	The COPT vehicle shall be provided with four-wheel chocks.	X			
10.7.7	Contractor shall provide a matching spare wheel and full size tire and an interior spare tire mount.	X			
Interior Features **The COLT shall have the following interior features:**					
10.8.1	Power Steering	X			
10.8.2	Power disk brakes	X			
10.8.3	Four wheel ABS	X			
10.8.4	Parking brake	X			
10.8.5	Air Conditioning	X			
10.8.6	AM/FM radio	X			
10.8.7	Integrated Bluetooth and steering wheel audio control	X			
10.8.8	Tilt & Telescopic Steering wheel	X			
10.8.9	Rear View Camera and Backup Sensor	X			
10.8.10	LCD display	X			
10.8.11	Back-up Alarm	X			
10.8.12	Power Windows	X			
10.8.13	Durable, easy to clean and comfortable seating	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
Outriggers and COPT Stabilization					
10.9.1	The COPT vehicle shall have a bed frame that will accommodate all Contractor-provided equipment cabinets and other required components.	X			
Exterior Features					
10.10.1	Any COPT exterior surface, including cabinets or storage boxes should be galvanized, painted, or otherwise protected from the weather and corrosion protection.	X			
10.10.2	All attaching hardware shall be stainless steel unless otherwise specified by the User Agency.	X			
10.10.3	The COPT shall have external LED lighting around the perimeter of the vehicle, capable of illuminating up to 25 feet away from the COPT. The top of the vehicle shall also be lighted such that any work can be performed on the mast at night.	X			
10.10.4	The COPT shall meet Federal Motor Carrier Safety Administration's (FMCSA's) conspicuity markings for commercial motor vehicles	X			
10.10.5	Bumpers shall be constructed of metal, attached to vehicle frame, bumper shall be strong enough to push a disabled vehicle without bending.	X			
Outriggers and COPT Stabilization					
10.11.1	The COPT shall have stabilizing outriggers that support the 110% of the weight of the COPT System under stressed load conditions, including 60 mph winds	X			
10.11.2	The COPT shall have a red indicator light in the tractor cab overhead and an audible warning in the cab whenever the outriggers are not stowed and the parking brakes are released.	X			
10.11.3	The COPT shall have a fully automatic hydraulic vehicle leveling system.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
10.11.4	The COPT shall have outriggers.	X			
10.11.5	The COPT shall have multiple position outriggers	X			
10.11.6	The COPT shall have four (4) outrigger Jacks and four (4) 18" x 18" x 1" Jack Pads with handles.	X			
COPT ENCLOSURE					
11.1	The COPT enclosure shall be NEMA 3R compliant and shall open from the sides of the vehicle.	X			
11.2	The Contractor shall provide 19" equipment 4-post racks that are sized to house the equipment provided by the Contractor and by AT&T as well as appropriately sized racks to house batteries. The racks shall have appropriate bracing for mobile off-road environment.	X			
11.3	The Contractor shall provide at least 2U of 19-inch rack space for future equipment growth.	X			
11.4	The roof of the equipment enclosure shall be capable of supporting the weight of one (1) satellite antenna dish provided by the Contractor.	X			
11.5	The COPT shall have a storage cabinet, capable to contain three (3) omnidirectional antennas. Antennas shall be five (5) feet long or less.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
11.6	The Contractor shall provide and install roof mounted antennas and Radio Frequency (RF) cables for use with wireless routers to be provided by the LA-RICS Authority and/or the User Agency. The antennas shall be provided in two (2) separate radomes with each radome providing antennas that support the bands specified in Sections 11.6.1, 11.6.2, 11.6.3, and 11.6.4, and with each having its own cable ending with a SMA male connector that will be routed from the roof to inside the equipment enclosure with three feet of excess length inside the enclosure. The two (2) radomes will be installed in a way to maximize their separation to maximize MIMO performance. Within each radome, the antennas shall have sufficient isolation and out-of-band rejection to ensure proper operation of 4G/5G, Wi-Fi, and positioning technologies. Each of the two radomes shall include a minimum of : 1. Two (2) antennas each covering all 3GPP defined LTE bands, including those between 600 MHz and 3,800 MHz 2. One (1) antenna covering GPS and GNSS bands, 1565 to 1608 MHz 3. Two (2) Wi-Fi bands at 2.4 GHz, 4.9 GHz, and 5.8 GHz (2,400 to 2,500 and 4,900 to 5,900 MHz) one of these antennas will be vertically polarized, and the other will be horizontally polarized 4. The COPT shall have external penetration for future installation of three (3) cables, ½" in size.	X			
COPT EQUIPMENT					

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
12.1	Heating, Ventilation, and Air Conditioning (HVAC)	X			
12.2	The COPT enclosure shall be climatized by an automated, redundant (with lead/lag controller), temperature and humidity-controlled HVAC system according to the specifications of all components within the enclosure plus an additional 2,000 BTU/hr additional heat while keeping the enclosure within the temperature and humidity levels of all electrical components.	X			
12.3	The HVAC system will be rated for heavy duty, continuous operation.	X			
12.4	The HVAC system will be designed and implemented to optimize air distribution and circulation throughout the COPT enclosure.	X			
Grounding					
12.5.1	The COPT shall comply with all grounding requirements as applicable,	X			
12.5.2	The COPT shall have a Main Ground Bar (Exterior)	X			
12.5.3	The COPT shall have an Equipment Ground Bar (Interior)	X			
Telecom Panel					
12.6.1	The COPT shall have weather proof Telco panel that is pretreated with fire stop.	X			
Power					
12.7.1	The COPT shall have both weatherproof internal and external GFI service receptacles.	X			
12.7.2	The COPT shall have weather proof lighting with emergency backup ballast to light the infrastructure portions of the COPT. Each cabinet shall have interior LED 600 Lumens light with auto on/off.	X			
12.7.3	The COPT shall have a weather proof AC Distribution Panel capable to support all equipment that requires AC power. 3-Wire Distribution Panel and be weather proof.	X			
12.7.4	The COPT shall have Automatic Transfer Switch:	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
12.7.5	The COPT AC Distribution Panel shall have NEMA 3R Enclosure.	X			
12.7.6	The COPT AC Distribution Panel shall have Surge Protection with Alarm.	X			
12.7.7	The COPT AC Distribution Panel shall have Cam Lock Connections for Alternate Source.	X			
12.7.8	Contractor shall provide at least two 40' or more shore power cables with Cam-locks.	X			
Generator and Fuel Tank					
12.7.9.1	The COPT shall have a generator and fuel tank sized to provide at least 48 hours of operation at full rated load, 100% duty.	X			
12.7.9.2	Generator shall support 120V at 40 or 50 amps.	X			
12.7.9.3	The COPT generator shall have an auto start and hour meter.	X			
12.7.9.4	The COPT generator shall be in an integrated sound attenuated enclosure.	X			
12.7.9.5	The COPT generator shall have a dedicated fuel tank.	X			
12.7.9.6	The outlet from the tank shall be equipped with a readily accessible and clearly visible shut-off valve adjacent to the tank. The valve shall be labeled "Fuel Tank Shut-Off". No reserve feature shall be included in the tank.	X			
12.7.9.7	Both fuel level sending units shall be readily accessible for easy removal without removing the fuel tank or cutting holes in the body. An easily removable access panel is acceptable.	X			
12.7.9.8	The tank has a tank filler that extends sufficiently high to prevent fuel from being spilled when vehicle is operating or parked on a 32 percent grade, or 9 percent side slope, and shall permit a rapid filling of the tank without airlocks. The tank shall be provided with adequate venting. Replacement fuel caps shall be readily available through local retail outlets. Cast Products, or equal, fuel fill pockets with spring loaded polished aluminum or stainless-steel fuel tank fill doors shall be provided.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
12.7.9.9	The fuel tank shall be equipped with a built-in drain sump so located that in a level position all moisture and foreign material shall be collected for draining. Contractor shall provide the sump with a readily accessible 3/4" brass drain plug.	X			
12.7.9.10	The fuel tank shall be mounted with insulated straps that encircle the tank in such manner as to prevent damage to the tank from torsion and flexing of the frame and to permit ready removal for cleaning and repairs.	X			
12.7.9.11	Generator exhaust shall be routed outside of the COPT enclosure and high enough such that personnel working around the vehicle will not be exposed to exhaust.	X			
12.7.9.12	The COPT generator shall have access to Vehicle fuel tank as ancillary fuel feed but shall not draw on the vehicle fuel tank below 25% of its capacity.	X			
12.7.9.13	The COPT shall have an exterior generator plug for an ancillary generator.	X			
12.7.9.14	The COPT shall have a generator tank fueling neck.	X			
12.7.9.15	The COPT shall have an automatic transfer switch. The transfer switch will automatically switch between generator and shore power with a preference for shore power.	X			
12.7.9.16	The automatic transfer switch will only be utilized if shore power is connected. The ATS will detect loss of commercial power and will automatically start the generator and switch to generator power.	X			
12.7.9.17	The generator will be equipped with an LCD controller, and 25% and 50% alarm stem.	X			
Power System					
12.7.10.1	The Power System shall be capable of providing power to all specialty components (outside of the 12 VDC power systems for the base vehicle operation) from any of the three following sources: shore, generator, or battery.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
12.7.10.2	The power system shall convert between AC and DC to accommodate the power requirements of each component. As such, the power system shall include at least one (1) inverter that converts -48 VDC (battery power) to 120 VAC and at least two rectifiers (with one hot standby spare) capable of converting 120 VAC to -48 VDC (shore or generator power).	X			
12.7.10.3	The power system shall support all components identified throughout this specification (including third party provided LTE and related equipment) and an additional growth of and 1 kWDC.	X			
12.7.10.4	The rectifiers and inverters shall be capable of achieving their respective loads of all components identified in these specifications plus the growth requirements of 12.7.10.3.	X			
DC Breakers and Fuses: **The COPT POWER System shall have at least the following Breakers and Fuses**					
12.7.11.1	DC Breakers: Two 50A, One 30A, Two 10A	X			
12.7.11.2	DC Breaker Spares: (1) 10A, (1) 30A, (1) 50A	X			
12.7.11.3	Fuses: provide appropriate fuses for each component	X			
Batteries					
12.7.12.1	The COPT power system shall have battery capacity sufficient to maintain full-load COPT operation (for all AC and DC powered components) for two (2) hours. The battery system shall support the power requirements of Requirement Nos./Reference Nos. 12.7.10.1 and 12.7.11.2. HVAC may be excluded from battery operation but may run from vehicle's engine.	X			
Alarm Panel (No Current Dry Contacts)					
12.8.1	The COPT shall have an alarm panel and support external contact closures for at least the following items: 1. Smoke Alarm 2. Intrusion Alarm 3. Hi & Low Temperature Alarms	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
12.8.2	Alarms shall be audible and alarm sound and volume shall be configurable per alarm type.	X			
Equipment Enclosure					
12.9.1	The COPT cabinet shall be UL® Listed NEMA 3R rated weather proof communications cabinet.	X			
12.9.2	The COPT shall have a cable tray.	X			
12.9.3	The COPT shall have a subfloor mounted cabling trays if required under the raised floor.	X			
12.9.4	All COPT interior cabling shall be dressed using cable tie strings	X			
12.9.5	The COPT will have two (2) separate storage cabinets to store documents and tools. Each cabinet shall be no less than 30" H x 24"D x 15"W.	X			
Electronics					
12.10.1	Contractor shall provide and securely fasten on a rack shelf inside the COPT enclosure one (1) satellite equipment controller, and one (1) BUC power supply corresponding to the Contractor-provided Model 1278 Mobile VSAT 1.2m Motorized Transportable Vehicle-Mount Antenna.	X			
12.10.2	Contractor shall also securely install AT&T provided FRMZ Components.	X			
BACKHAUL					
Fiber					
13.1.1	The COPT shall have a fiber patch panel.	X			
13.1.2	The external fiber patch panel shall be connected with optical fiber to the equipment enclosure space.	X			
13.1.3	The COPT shall include an external storage space for a minimum of 300 feet of optical fiber cable for connection to an external fiber service.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
13.1.4.1	The COPT shall have a minimum of 300 feet of single mode optical fiber. The 300' fiber cable shall be single mode fiber pair with appropriate connectors to match the patch panel provided.	X			
13.1.4.2	OS2 LC LC AnyAngle Fiber Patch Cables or similar - Plenum Duplex Single-Mode Fiber Jumper with Corning 9/125um core/cladding. AnyAngle flexible boot bends and stays in any direction up to 90 degrees. Plenum OFNP, water and UV resistant, yellow, 2.0mm fiber patch cable. Reliable 1/10/40/100 Gigabit Singlemode cable.	X			
13.1.4.3	OS2 LC LC Armored Fiber Patch Cables or similar - Duplex LC to LC Singlemode 9/125 jumper cord. Terminated with small form factor (SFF) ceramic ferrule LC-LC patch connectors with lc duplex clips included. A single-mode fiber patch cable for durable, reliable and fast data transmission. Inside the crush resistant armor wrap is an OFNR, yellow colored, 2.0mm outer diameter, PVC fiber jumper with zip-cord	X			
13.1.4.4	Fiber Jumpers required for FRMZ Components and services will be specified by AT&T.	X			
13.1.4.5	Ten (10) fiber cables of varying lengths from 2 ft to 20 ft fiber patch cords.	X			
Satellite					
13.2.1.1	Contractor shall provide and install: Satellite Model AvL 1278 Ku-Band Mobile VSAT 1.2m Motorized Transportable Vehicle-Mount Antenna on top of the COPT enclosure.	X			
13.2.1.2	Contractor shall provide and install: AvL ACU AAQ satellite antenna controller with one button auto-acquisition of selected satellite, mounted on a rack inside the shelter	X			
13.2.1.3	Contractor shall provide and install: AVL 1RU 55W 48V BUC Power Supply	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
13.2.1.4	Contractor shall provide and install: The satellite dish shall be connected to the electronics located via a patch panel (Roxtec port or similar), such that the dish can be easily removed from the top of the vehicle when necessary	X			
13.2.2	The satellite antenna shall be installed in a location that provides a 360-degree clear view of the geostationary satellites without obstruction from the COPT components.	X			
13.2.3	The satellite antenna shall be equipped with an auto-alignment capability that is capable of positioning the satellite antenna based on signal levels to within 0.1 degree of accuracy	X			
MAST					
Pneumatic Mast					
14.1.1	COPT shall have at least a 30-foot pneumatic heavy-duty mast that has a locking collars, rotating base, with an overall load capacity of all mast based components but no less than 300-lb	X			
14.1.2	The COPT mast shall be capable of sustaining winds in excess of 100 mph (including all mast based components).	X			
14.1.3	The COPT mast assembly will also contain a complete guy system/kit for use in high winds and other required mast stabilizing situations.	X			
14.1.4	The mast will be made of stainless-steel hardware to ensure protection from corrosion.	X			
14.1.5	Contractor shall provide the mast with a warning system that automatically activates a 3/4" minimum flashing red light when the vehicle ignition is in the "ON" position and the mast is not fully retracted. The system shall activate a 120 dB buzzer when the ignition is in the "ON" position and the parking brakes are released.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
14.1.6	Contractor shall also provide a high voltage, electromagnetic and electrostatic field detection system to automatically stop mast extension when it senses overhead powerline with "look-up" light and other capabilities and performance equivalent or better than the Will-Burt D-TEC Safety System.	X			
14.1.7	Contractor shall provide and install a L-810 LED tower obstruction light system on the antenna mounting system that complies with Federal Aviation Administration (FAA) regulations. Obstruction light system will include power cables interconnected with the COPT power system. Power cable associated with the obstruction light shall be permanently installed as coiled hose that compactly retracts around nested mast and neatly fits around extended mast.	X			
14.1.8	Contractor shall provide a bottle of mast lubricant, 16 ounces or more	X			
Mast Antenna Mounting System					
14.2.1	The mast will have an antenna removal connector section that allows a single sector antenna mounting system to be easily attached and detached from the mast.	X			
14.2.2	This functional antenna connector will also employ a simple methodology to change mast antennas (easily deployable and changeable).	X			
14.2.3	The mast and all its loading, including antenna attachments, and cables, shall be able to withstand wind speeds of 100 mph or higher.	X			
Mast Air Compressor					
14.3.1	The mast air compressor system shall have all the appropriate gauges, controls, check valves and pressure switches to ensure error free deployment and retraction of the mast.	X			
Mast Weather Protection					

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
14.4.1	The mast shall also have a protective weather cover, installation and operation manual and any other protective accessories to ensure the proper care and functioning of the mast.	X			
14.4.2	The COPT shall have a mast valve control labels.	X			
14.4.3	The COPT shall have mast drain labels at base of mast.	X			
14.4.4	The COPT shall have mast air controls on the roof.	X			
Mast Based Components					
14.5.1.1	Contractor shall provide and install antennas, cables, and connectors as follows: LTE Antennas: Two (2) CommScope DB583E-SN omnidirectional antennas or similar.	X			
14.5.1.2	Coaxial cables that connect with mast-top installed antennas with RF equipment in the Equipment Enclosure shall be equal to Times Microwave LMR-400 or better and terminated with 7/16" Din Bulkhead Connectors with Weather Caps connectors in the Equipment Enclosure.	X			
14.5.1.3	All cables with connected antennas shall achieve a minimum 20 dB return loss and Passive Intermodulation (PIM) of -140dBc				
14.5.2.1	In addition, Contractor shall dimension the mast loading to allow future equipment as required by the system growth: One (1) omnidirectional transmit/receive antenna, 3 to 4 feet long, with up to three (3) inches diameter, weight up to four (4) lbs and wind loading area of 0.4ft^2.	X			
14.5.2.2	Three (3) RF cables, ½" superflex (LMR-400 or better)	X			
EXTERIOR CABLE CONNECTIONS					
Mast RF Cable Connections					

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
15.1.1.1	Radio Cable Connectors Options Enclosure housed RF equipment The COPT shall have an external weatherproof bulkhead RF Cable connector cabinet wave guide entry that enables adding RF cables from equipment enclosure to tower antennas to complete connection to enclosure internal eNodeB (and other) equipment. The COPT shall have at least 9 to 12 weather-proof bulkhead RF Jacks with covers.	X			
15.1.1.2	Externally mounted RF equipment The COPT shall have at least 3 weather-proof bulkhead Fiber Connectors enabling connection to tower mounted RF equipment to enclosure telecommunications equipment.	X			
Shore Power					
15.2.1	The COPT shall have an external weatherproof bulkhead power connector cabinet.	X			
15.2.2	All external outlets shall have Woodhead/FD outlet boxes with Woodhead Watertite #65W47 single flip lids and NEMA L515 female receptacles or equal.	X			
15.2.3	All watertite plugs and connectors shall meet NEMA Type 4X requirements when properly mated to its corresponding watertite component.	X			
15.2.4	Mounting locations and installation of 110 VAC related components to be determined and approved by the LA-RICS Authority during design review.	X			
15.2.5	The COPT shall have at least 1 external generator weather-proof bulkhead connection jack.	X			
Backhaul					

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
15.3.1	The COPT shall have an external weatherproof bulkhead connector cabinet.	X			
15.3.2	The COPT shall have at least 8 RJ45 weather-proof bulkhead jacks.	X			
15.3.3	The COPT shall have at least 2 Fiber connection weather-proof jacks.	X			
Monitoring System					
16.1	Contractor shall provide a monitoring system that will have both local and remote operational status monitoring and local and remote management capabilities.	X			
16.2	The monitoring system shall have the storage capacity to retain locally at least six (6) months of alarmed events and user activity logs	X			
16.3	The COPT enclosure will contain a monitoring system server that can be connected externally to a screen, a keyboard, and a PC mouse.	X			
16.4	The monitoring system will include visual and audible alarm, features to immediately notify COPT maintenance personnel when a condition occurs.	X			
16.5	Contractor will install an anemometer on the mast that will be connected to the Monitoring Subsystem and will send alarms when wind speed exceeds 40 miles per hour	X			
16.6	The monitoring system will provide Key Performance Indicators (KPIs) of the eNodeB the Satellite modem, and any electronic equipment that supports Simple Network Management Protocol(SNMP).	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
16.7	At a minimum, the monitoring system will monitor and report the following: 1. Smoke and/or fire alarms; 2. Indoor temperature and alarms; 3. Outdoor temperature; 4. HVAC alarms; 5. Cabinet intrusion; 6. Exterior motion detector alarms; 7. Interconnect equipment; 8. Low/High battery voltage for each battery; 9. Rectifier/inverter failure; 10. High/low battery temperature for each battery; 11. Low/high -48 VDC; 12. All rectifier alarms; 13. Low/high temperature of the -48 VDC system; 14. Generator fuel level; 15. Generator low fuel alarms; 16. Generator fuel overfill alarms; 17. Generator battery alarms; 18. Generator online alarms; 19. Generator high temperature alarms; 20. Generator over crank alarms; 21. Generator over speed alarms; 22. Generator low oil alarms; 23. Generator transfer switch status; 24. And other applicable generator alarms provided by generator manufacturer; 25. AC surge suppression alarm indication; 26. Voltage Standing Wave Ration (VSWR) on output of the combining system;	X			
ADDITIONAL COPT REQUIREMENTS					

ENCLOSURE

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
17.1	The COPT shall have at least six (6) safety cones	X			
17.2	The COPT shall have at least one (1) tool kit.	X			
17.3	The COPT shall have at least two (2) fire extinguishers.	X			
17.4	The COPT shall have at least one (1) eye wash kit.	X			
17.5	The COPT shall have at least one (1) first aid kit.	X			
17.6	The COPT shall have at least one (1) CO2 Sensor.	X			
17.7	The COPT shall have at least one (1) grounding kit.	X			
17.8	The COPT shall have at least two (2) safety vests [one (1) medium size and one (1) large size].	X			
17.9	The COPT shall have at least two (2) battery rechargeable flashlights, one (1) pick and one (1) shovel.	X			
17.10	The COPT shall have at least one (1) full set of instruction/operations manual including wiring & plumbing schematics, dimensional overviews, guying footprint and component warranty information.	X			
COPT FUNCTIONAL TESTING AND ACCEPTANCE					

ENCLOSURE

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
18	A test plan shall be developed by the Contractor and approved by the LA-RICS Authority to test all the major functions and components of the COPT to ensure proper functionality and adherence to all specified requirements and regulations either written or implied. The following list are the minimum required major functional and component tests to be developed and approved. All other items that have to meet specific requirements and local, state, or federal regulations must also be tested or show documented proof of certified test completions and adherence to those regulations. All COPT tests shall be witnessed by LA-RICS Authority, any of its designated agents, and/or User Agency personnel. LA-RICS Authority shall be notified a minimum of twenty-one (21) calendar days in advance of these tests and shall coordinate with the Contractor to determine the appropriate date, time, and location for the tests to be conducted. The Contractor shall operate the COPT throughout all tests. The Contractor shall provide all raw test results and test summaries in its provided documentation to the LA-RICS Authority within one (1) week of test completion by the Contractor.	X			
Component Functional Testing					
18.1	Component Functional Testing shall demonstrate compliance with all functional specifications in this Appendix B.2 (COPT Specifications). The Contractor shall provide a detailed test plan for each major component that tests its primary functionality and document test past to provide adherence to specifications and regulations and review with LA-RICS Authority for modifications, changes, and approval. Any items not passing these tests will be put onto a completion check list to be followed up on with resolutions and timeframes for those resolutions to be rectified.	X			
18.1.1	**COPT Performance Tests** The COPT Performance Test shall test all performance specifications in this Appendix B.2 (COPT Specifications).	X			

ENCLOSURE

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
18.1.2	**Vehicle drive test** An acceptance road test shall be conducted with the COPT loaded to the manufacturer's certified weight rating. A continuous run of fifty (50) miles or more shall be made under any or all of the aforementioned operating conditions, during which time the COPT shall show no loss of power or overheating. The transmission, drive shaft or shafts and rear drive axle shall run quietly and be free from abnormal vibration or noise throughout the operating range of COPT.	X			
18.1.3	**Vehicle set up test** A complete demonstration of how the COLT, mast, satellite dish, network, alarm and monitoring system operate shall be conducted by the Contractor during the on-site inspection of the completed COLT with the LA-RICS Authority and/or User Agency.	X			
18.1.4	**Mast and Auto-Leveling (Stabilization) Struts Performance Test** 1. A minimum of two (2) operations (raising and lowering the mast and leveling/stabilizing the vehicle) shall be conducted at normal hydraulic operating pressure. 2. The mast and stabilization struts shall be capable of operating continuously (i.e., in a raised mast configuration or in a leveled configuration) for a minimum of twenty-four (24) hours without hydraulic oil overheating.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
18.1.5	**Generator, Shore, and Batteries test** 1. The ATS shall be tested to confirm that the generator auto-starts and the vehicle power systems switch to generator power after shore power is lost. 2. The ATS shall be tested to confirm that the generator turns off and the vehicle power systems switch to shore power after shore power is restored. 3. The generator will be tested for manual turn-on and shut-off under a full load. 4. The power system will be tested to ensure the battery backup supplies power to all systems in the event of loss of generator and shore power for a minimum of 30 continuous minutes.	X			
18.1.6	**Passive InterModulation (PIM) and Sweep test:** The lines and antennas will be tested for PIM and return loss on all RF lines and connectors with supplied antennas attached and achieve the performance specifications.	X			
18.1.7	**Satellite connectivity test** The satellite system will be tested for connectivity to the satellite network and verify throughput, Committed Information Rate (CIR) and Grade of Service (GoS).	X			
18.1.8	**eNodeB and Connectivity Test to AT&T FirstNet FRMZ** The eNodeB will be tested and connectivity will be verified between a test mobile unit and the FirstNet Core. Contractor will support testing of connectivity, and address any issues identified with Contractor provided equipment.	X			
18.1.9	**Coverage test** The mast will be deployed with antenna attached in flat uncluttered environment and a drive test will verify coverage. Resulting coverage test plot will be provided to the LA-RICS Authority.	X			

ENCLOSURE

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
Final acceptance testing					
18.2.1	Final acceptance testing will be complete when all functionality tests are complete with no check list items open and passed. Final acceptance will include all documentation delivered and 100% accurate with no missing information.	X			
18.2.2	In the event the COPT fails to meet the test requirements on first trials, second trials may be made at the option of the Contractor within thirty (30) calendar days of the first trial. Such trials shall be final and conclusive, and failure to comply with these requirements may be subject to liquidated damages as stipulated in Section 32.0 of the Contract.	X			
TRAINING					
19.1	Contractor shall provide training to the LA-RICS Authority and/or User Agency personnel its authorized personnel and technicians in the operation and maintenance of the COPT	X			
19.2	The training shall be completed not more than three (3) weeks before the deployment tests, unless otherwise agreed upon by the Contractor and the User Agency, so that the deployment tests shall provide hands on experience to the students.	X			
19.3	Contractor shall develop a training package with full curriculum and submit to the LA-RICS Authority for review and approval 30 days after the Effective Date or a date agreed upon by the Contractor and the LA-RICS Authority.	X			
19.4	The Contractor's training package shall include the following: 1. Suggested number of participants for each class; 2. The prerequisites for all participants; 3. The length of each class in hours; and 4. The total number of trainer hours proposed.	X			
19.5	The Contractor's training package shall describe the type of refresher training recommended (e.g., updated user training, changes to system configuration).	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
19.6	Training materials (both hardcopy and electronic) shall be provided a minimum of three (3) weeks prior to the start of any training course or a date agreed upon by the Contractor and User Agency.	X			
19.7	Training materials shall be customizable based on the functionality being sought by the LA-RICS Authority or User Agency.	X			
19.8	All training courses shall be scheduled by the Contractor and approved by the LA-RICS Authority and User Agency.	X			
19.9	These training requirements are included primarily to provide the LA-RICS Authority and/or User Agency the opportunity to train its end users and technicians in the operation and maintenance of the COPT. However, the Contractor will include any necessary changes that are the result of providing an integrated solution.	X			
19.10	The Training will provide a computer database tracking mechanism for the training received by each student. The minimum information tracked shall include students name, agency, type of training and hours of training received, by subject and cumulative training time.	X			
19.11	All training will be conducted at a location approved by the LA-RICS Authority and/or User Agency (any training that requires offsite participation shall be specifically noted).	X			
19.12	The training will be flexible enough to allow the LA-RICS Authority and/or User Agency to adjust the participants or curriculum to achieve the greatest benefit for the training hours provided. All training shall be conducted as close to "go live" dates as possible, except where noted in the project schedule.	X			
19.13	Training materials (both hardcopy and electronic) shall be provided to the LA-RICS Authority and/or User Agency a minimum of three (3) weeks prior to the start of any training course.	X			
19.14	The Contractor shall provide train the trainer style training for end users (e.g., Police Officers, Fire Fighters, Dispatchers and Dispatch Supervisors).	X			

ENCLOSURE

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
19.15	A full training curriculum is required for Engineering and Technical personnel. Refresher training is not acceptable for initial COPT introduction.	X			
19.16	All training and materials shall be subject to review and approval by the LA-RICS Authority prior to use or distribution by the Contractor.	X			
19.17	The Contractor shall recommend the number and type of training sessions to ensure that a sufficient number of personnel are trained for COPT system use and maintenance.	X			
19.18	The LA-RICS Authority may assist with providing classroom space for training sessions. The Contractor shall be responsible for providing all training courses within these facilities	X			
19.19	The Contractor shall provide all instructional materials, media presentation devices, presentation media, lesson plans, and course instructors.	X			
19.20	Student to instructor ratios for all training sessions shall not exceed a ratio of ten (10) students to one (1) instructor unless approved by the LA-RICS Authority and/or User Agency.	X			
19.21	In addition to formalized training courses, the Contractor shall list any electronic utilities (e.g., self-guided tutorials) that provide an on-line or off-line training environment. The nature of such utilities shall be presented, along with the content of such courses. These utilities will mirror the installed operations by using live data wherever possible.	X			
19.22	All manuals, handouts, and other printed materials used during the training shall become the property of the LA-RICS Authority and/or User Agency.	X			
19.23	The LA-RICS Authority shall be granted the right to reproduce unlimited copies of the training materials for use by LA-RICS Authority and/or User Agency.	X			
19.24	If any specialized test/diagnostic equipment is required or proposed to support the COPT, the Contractor shall include training for this equipment.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
19.25	The Contractor shall include hands-on training, which includes simulations of common failures and maintenance processes.	X			
19.26	The Contractor shall provide all equipment required for hands-on training.	X			
19.27	All courses shall be professionally video recorded by the Contractor and become LA-RICS Authority property for the purpose of refreshment course and/or new training.	X			
19.28	The Contractor will include a training outline and a copy of all the standard documentation (user, administrator, installer guides, etc.) for all components (hardware, firmware, and software) proposed.	X			
19.29	Contractor will recommend the number and type of training sessions to ensure that a sufficient number of personnel are trained for each class.	X			
19.30	Contractor shall provide pricing for additional training as requested by the LA-RICS Authority.	X			
19.31	Contractor will provide training program on the basic installation and troubleshooting of the Contractor-provided equipment to include, but not be limited to: COPT overview, individual component troubleshooting and repair at module level, COPT Satellite and antenna alignment and adjustment, COPT component configuration, and preventative maintenance. The Contractor will identify any additional training deemed necessary to properly maintain and restore the COPT in a timely matter as determined by the LA-RICS Authority. Training will include use of the live COPT.	X			
19.32	The Training Program shall include but not be limited to the course modules presented below and others as deemed appropriate by the Contractor:	X			
19.32.1	COPT Overview;	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
19.32.2	COPT infrastructure and ancillary equipment operation and maintenance (including equipment for environmental control system, backup power system, fuel monitoring system, and FAA obstruction lighting control).	X			
19.32.3	Component Provisioning	X			
19.32.4	eNodeB Field Maintenance;	X			
19.32.5	COPT Systems Operations (Fault management, hardware/software management, performance management, configuration);	X			
19.32.6	Troubleshooting failures;	X			
19.32.7	Performance Management and Troubleshooting Performance Issues (including database consistency checks);	X			
19.32.8	Course Materials: The Contractor will provide hard copy and soft copy course materials in sufficient quantities to satisfy participant requirements.	X			
19.32.9	The LA-RICS Authority may video tape training session and post such training video, together with softcopies of the training on LA-RICS Authority and LA-RICS Authority Member web sites for use of personnel. Personnel will be authorized to download and make personal copies of these materials.	X			
19.32.10	Certification Program: The Contractor will provide certification of course completion to all course participants. A formal Certification Program will be established for LA-RICS Authority personnel to achieve sufficient skills and expertise to fully maintain the COPT.	X			

Reference No.	COPT Requirements	COPT Mandatory Minimum Requirements (X = Yes)	Bidder's Compliant		Bidder Comments
			YES	NO	
19.32.11	Technician Training: The Contractor will train ten (10) Authority technicians on eNodeB, System Management and other key COPT Components, Subsystems and other COPT elements to a level of quality and certification the Contractor would require for its own technicians.	X			
SCHEDULE					
20	Acceptance testing, deployment testing, training and delivered documentation shall be completed during the period between 120 and 180 calendar days after contract award, or a date specified by the LA-RICS Authority.	X			