LOS ANGELES REGIONAL INTEROPERABLE COMMUNICATIONS SYSTEM AUTHORITY

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SENT CORRESPONDENCE BY:
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July 3, 2015

ADDENDUM B
REQUEST FOR STATEMENT OF QUALIFICATIONS
LOS ANGELES REGIONAL INTEROPERABLE COMMUNICATIONS SYSTEM – PUBLIC SAFETY BROADBAND NETWORK (PSBN) DEVICES
RSFQ NO. LA-RICS 010

This Addendum B forms a part of the Request for Statement of Qualifications (RFSQ) for the Los Angeles Regional Interoperable Communications System (LA-RICS) – Public Safety Broadband Network (PSBN) Devices (RFSQ No. LA-RICS 010), issued May 14, 2015.

REVISIONS

1. RFSQ, Section 1.9.1 shall be deleted in its entirety and replaced with the following language:

   1.9.1 A Master Agreement will be executed with all Vendors who meet the minimum requirements and whose devices meet the mandatory minimum qualifications for a particular PSBN Device Category(ies) that the Vendor is seeking to qualify for as set forth in Appendix B (PSBN Device Categories).

2. RFSQ, Section 1.9.2 shall be deleted in its entirety and replaced with the following language:

   1.9.2 In the event that a Vendor's device meets the Minimum Qualifications for a particular PSBN Device Category(ies) but does not have the requisite Certifications/Test Results pursuant to Appendix B (PSBN Device Categories) at the time of SOQ submission, the Authority will issue the

Vendor a Master Agreement provided Vendor agrees to **each** of the following requirements:

1. Vendor shall secure the requisite Certifications/Test Results for each device the Vendor is qualified for, pursuant to Appendix B (PSBN Device Categories), within **six (6) months** from the date of execution of the Master Agreement.

2. Vendor shall guarantee that the Warranty Period for any PSBN Devices purchased under the Request for Bid process will be extended by the time period it takes Vendor to complete all the Minimum Qualifications regarding Certifications/Test Results pursuant to Appendix B (PSBN Device Categories), and such Certifications/Test Results are received and approved by the Authority.

3. Vendor shall be responsible at its sole cost, with providing the Authority with compliant PSBN Devices that pass certification, and will be responsible for making any changes needed to devices already deployed to meet certification, which may include but is not limited to, field modification of any deployed devices, or a complete replacement of a device if needed.

4. Vendor shall be responsible for any harm the PSBN Devices cause to the PSBN System, and Vendor shall be responsible for all costs associated with restoring the PSBN System to a fully operational condition.

5. Vendor agrees that any and all costs associated with device Certifications/Test Results shall be borne solely of the Vendor.

6. Failure of Vendor to secure said Certification/Test Results within six (6) months from the date of execution of the Master Agreement to bring its device(s) into compliance with the Minimum Qualifications pursuant to Appendix B (PSBN Device Categories), may result in Vendor's Master Agreement being terminated in accordance with Paragraph 47.0 (Termination for Default) of Appendix D (Sample Master Agreement). Additionally, Vendor may be required to refund the Authority and/or Permitted Purchaser, as set forth in the Work Order, in full for the Total Maximum Amount of PSBN Devices purchased under a Work Order, within sixty (60) business days of

notification from the Authority that Vendor's Master Agreement is being Terminated for Default in accordance with Paragraph 47.0 (Termination for Default) of Appendix D (Sample Master Agreement).

3. RFSQ, Section 2.5.5.2 (PSBN Device Categories Compliance Matrix) shall be deleted in its entirety and replaced with the following language:

2.5.5.2 PSBN Device Categories Compliance Matrix

SOQ Form 3 (PSBN Device Categories Compliance Matrix) of Appendix A (Required Forms) is comprised of a separate compliance matrix for each PSBN Device Category as follows:

- **Category 1** – In-Vehicle Routers
- **Category 2** – USB Modems
- **Category 3** – Smartphones
- **Category 4** – Tablets
- **Category 5** – Outdoor Units
- **Category 6** – Portable Hotspots
- **Category 7** – mPCIe LTE Modems
- **Category 8** – Universal Integrated Circuit Cards (UICC)

Vendors shall complete in its entirety and submit the appropriate SOQ Form 3 (PSBN Device Categories Compliance Matrix) of Appendix A (Required Forms) for **each** device and **each** PSBN Device Category for which the Vendor intends to qualify for. For example, if a Vendor intends to qualify a device for Category 1 (In-Vehicle Routers) and an additional device for Category 6 (Portable Hotspots), then the Vendor must complete the respective PSBN Device Matrix for Category 1 (In-Vehicle Routers) **and** Category 6 (Portable Hotspots) **only**. The Vendor **does not** need to submit a PSBN Device Matrix for the remaining Categories.

Vendors shall use SOQ Form 3 (PSBN Device Categories Compliance Matrix) to demonstrate that **each** device it intends to qualify for meet the requisite Minimum Qualifications and the requisite certification/testing for **each** PSBN Device Category that the Vendor intends to qualify for pursuant to Appendix B (PSBN Device Categories) and Section 1.7 (PSBN Device Categories Minimum Qualifications) of this RFSQ. Vendors may submit additional PSBN Device Compliance Matrices at

some future date should a new device(s) meet the requirements become available.

The Authority, in its sole discretion, will determine whether the information provided by the Vendor in SOQ Form 3 (PSBN Device Compliance Matrix), for the specific device(s) the Vendor is seeking to qualify for, demonstrates that the Vendor's device(s) qualifies under that specific PSBN Device Category as set forth in Appendix B (PSBN Device Categories).

Vendors whose devices meet the Minimum Qualifications for a particular PSBN Device Category(ies) **and** meet the requisite Certifications/Test Results at the time of SOQ submission for the PSBN Device Category(ies) that the Vendor is seeking to qualify for as set forth in Appendix B (PSBN Device Categories) will qualify for a Master Agreement.

However, in the event that a Vendor's device meets the Minimum Qualifications for a particular PSBN Device Category(ies), but does not have the requisite Certifications/Test Results pursuant to Appendix B (PSBN Device Categories) at the time of SOQ submission, the Vendor will qualify for a Master Agreement provided Vendor agrees to **each** of the following requirements:

1. Vendor shall secure the requisite Certifications/Test Results for each device the Vendor is qualified for, pursuant to Appendix B (PSBN Device Categories), within **six (6) months** from the date of execution of the Master Agreement.

2. Vendor shall guarantee that the Warranty Period for any PSBN Devices purchased under the Request for Bid process will be extended by the time period it takes Vendor to complete all the Minimum Qualifications regarding Certifications/Test Results pursuant to Appendix B (PSBN Device Categories), and such Certifications/Test Results are received and approved by the Authority.

3. Vendor shall be responsible at its sole cost, with providing the Authority with compliant PSBN Devices that pass certification, and will be responsible for making any changes needed to devices already deployed to meet certification, which may include

but is not limited to, field modification of any deployed devices, or a complete replacement of a device if needed.

4. Vendor shall be responsible for any harm the PSBN Devices cause to the PSBN System, and Vendor shall be responsible for all costs associated with restoring the PSBN System to a fully operational condition.

5. Vendor agrees that any and all costs associated with device Certifications/Test Results shall be borne solely of the Vendor.

6. Failure of Vendor to secure said Certification/Test Results within six (6) months from the date of execution of the Master Agreement to bring its device(s) into compliance with the Minimum Qualifications pursuant to Appendix B (PSBN Device Categories), may result in Vendor's Master Agreement being terminated in accordance with Paragraph 47.0 (Termination for Default) of Appendix D (Sample Master Agreement). Additionally, Vendor may be required to refund the Authority and/or Permitted Purchaser, as set forth in the Work Order, in full for the Total Maximum Amount of PSBN Devices purchased under a Work Order, within sixty (60) business days of notification from the Authority that Vendor's Master Agreement is being Terminated for Default in accordance with Paragraph 47.0 (Termination for Default) of Appendix D (Sample Master Agreement).

Failure to complete the SOQ Form 3 (PSBN Device Categories Compliance Matrix) for the specific category(ies) which the Vendor is seeking to qualify for may result in the SOQ being disqualified without further consideration in the Authority's sole discretion. If an SOQ is disqualified, and a Vendor remains interested in becoming a Qualified Contractor, Vendor shall resubmit the SOQ package in its entirety in accordance with this RFSQ.

4. RFSQ, Section 3.1.2, shall be deleted in its entirety and replaced with the following language:

3.1.2 A review to determine that <u>each</u> of the Vendor's device(s) meet the Minimum Qualifications for <u>each</u> PSBN Device Category in accordance with Section 1.7 (PSBN Device Categories Minimum Qualifications),

Appendix B (PSBN Device Categories), and Section 2.5.5 (Vendor's Qualifications) for which it is intending to qualify for.

5. Appendix A (Required Forms), SOQ Form 1 (Vendor Organization/Certification), is deleted in its entirety and replaced with Enclosure 1 (Appendix A, SOQ Form 1, Vendor Organization/Certification) attached to this Addendum B.

6. Appendix A (Required Forms), SOQ Form 3 (PSBN Device Categories Compliance Matrices), are deleted in their entirety and replaced with Enclosure 2 (Appendix A, SOQ Form 3, PSBN Device Categories Compliance Matrices) enclosed with this Addendum B. Please note that there have been changes to the Device Mandatory Minimum Qualifications.

- ✓ Appendix A, SOQ Form 3.1 (Category 1 – In-Vehicle Routers) is deleted in its entirety and replaced with the Appendix A, SOQ Form 3.1 (Category 1 – In-Vehicle Routers) contained within Enclosure 2 to this Addendum B.

- ✓ Appendix A, SOQ Form 3.2 (Category 2 – USB Modems) is deleted in its entirety and replaced with the Appendix A, SOQ Form 3.2 (Category 2 – USB Modems) contained within Enclosure 2 to this Addendum B.

- ✓ Appendix A, SOQ Form 3.3 (Category 3 – Smartphones) is deleted in its entirety and replaced with the Appendix A, SOQ Form 3.3 (Category 3 – Smartphones) contained within Enclosure 2 to this Addendum B.

- ✓ Appendix A, SOQ Form 3.4 (Category 4 – Tablets) is deleted in its entirety and replaced with the Appendix A, SOQ Form 3.4 (Category 4 – Tablets) contained within Enclosure 2 to this Addendum B.

- ✓ Appendix A, SOQ Form 3.5 (Category 5 – Outdoor Units) is deleted in its entirety and replaced with the Appendix A, SOQ Form 3.5 (Category 5 – Outdoor Units) contained within Enclosure 2 to this Addendum B.

- ✓ Appendix A, SOQ Form 3.6 (Category 6 – Portable Hotspots) is deleted in its entirety and replaced with the Appendix A, SOQ Form 3.6 (Category 6 – Portable Hotspots) contained within Enclosure 2 to this Addendum B.

- ✓ Appendix A, SOQ Form 3.7 (Category 7 – mPCIe LTE Modems) is deleted in its entirety and replaced with the Appendix A, SOQ Form 3.7 (Category 7 – mPCIe LTE Modems) contained within Enclosure 2 to this Addendum B.

- ✓ Appendix A, SOQ Form 3.8 (Category 8 – Universal Integrated Circuit Cards (UICC)) is deleted in its entirety and replaced with the Appendix A, SOQ Form 3.8 (Category 8 – Universal Integrated Circuit Cards (UICC)) contained within Enclosure 2 to this Addendum B.

If your company has already submitted an SOQ in response to RFSQ No. LA-RICS 010, then your company will need to resubmit Enclosure 1 (Appendix A, SOQ Form 1) to affirm that your company accepts all the updated language to the RFSQ as indicated in this Addendum B as well as Enclosure 2 (Appendix A, SOQ Form 3.1 – 3.8) in order to be considered as a qualified Vendor. In order for the Authority to consider your company's PSBN Device, your company is required to resubmit each SOQ Forms 3.1-3.8 in Enclosure 2 to replace the SOQ Form 3 that your company submitted prior to issuance of this Addendum B.

7. Appendix B (PSBN Device Categories) is deleted in its entirety and replaced with Enclosure 3 (Appendix B, PSBN Device Categories) attached to this Addendum B.

8. Appendix D (Sample Master Agreement), Paragraph 3.0 (Work) is revised to include Paragraph 3.3 (PSBN Device Certifications/Test Results) as follows:

3.3 PSBN Device Certifications/Test Results

In the event that Contractor's device(s) met the Minimum Qualifications for a particular PSBN Device Category(ies) but did not have the requisite Certifications/Tests pursuant to Exhibit A (PSBN Device Categories) at the time this Master Agreement was issued, Contractor shall meet **each** of the following requirements:

3.3.1 Contractor shall secure the requisite Certifications/Test Results for each device the Contractor is qualified for under this Master Agreement, pursuant to Exhibit A (PSBN Device Categories), within **six (6) months** from the date of execution of this Master Agreement.

3.3.2 Contractor shall guarantee that the Warranty Period for any PSBN Devices purchased under the Request for Bid process will be extended by the time period it takes Contractor to complete all the Minimum Qualifications regarding Certifications/Test Results pursuant to Exhibit A (PSBN Device Categories), and such

Certifications/Test Results are received and approved by the Authority.

3.3.3 Contractor shall be responsible at its sole cost, with providing the Authority with compliant PSBN Devices that pass certification, and will be responsible for making any changes needed to devices already deployed to meet certification, which may include but is not limited to, field modification of any deployed devices, or a complete replacement of a device if needed.

3.3.4 Contractor shall be responsible for any harm the PSBN Devices cause to the PSBN System, and Contractor shall be responsible for all costs associated with restoring the PSBN System to a fully operational condition.

3.3.5 Contractor agrees that any and all costs associated with device Certifications/Test Results shall be borne solely of the Contractor.

3.3.6 Failure of Contractor to secure said Certification/Test Results within six (6) months from the date of execution of this Master Agreement to bring its device(s) into compliance with the Minimum Qualifications pursuant to Exhibit A (PSBN Device Categories), may result in Contractor's Master Agreement being terminated in accordance with Paragraph 47.0 (Termination for Default) of this Master Agreement. Additionally, Contractor may be required to refund the Authority and/or Permitted Purchaser, as set forth in the Work Order, in full for the Total Maximum Amount of PSBN Devices purchased under a Work Order, within sixty (60) business days of notification from the Authority that Contractor's Master Agreement is being Terminated for Default in accordance with Paragraph 47.0 (Termination for Default) of this Master Agreement.

9. Appendix D (Sample Master Agreement), Paragraph 47.1, a sub-paragraph of Paragraph 47.0 (Termination for Default) is deleted in its entirety and replaced with the following language:

47.1 The Authority may, by written notice to the Contractor, terminate the whole or any part of this Master Agreement, if, in the judgment of Authority's MAPD:

- Contractor has materially breached this Master Agreement;

- Contractor fails to timely provide and/or satisfactorily perform any task, deliverable, service, or other work required either under this Master Agreement or any Work Order issued hereunder;

- Contractor fails to demonstrate a high probability of timely fulfillment of performance requirements of any Work Order issued under this Master Agreement, or of any obligations of this Master Agreement and in either case, fails to demonstrate convincing progress toward a cure within five (5) working days (or such longer period as the Authority may authorize in writing) after receipt of written notice from the Authority specifying such failure;

- Contractor fails to secure the requisite Certifications/Test Results for each device the Contractor is qualified for under this Master Agreement, pursuant to Exhibit A (PSBN Device Categories), within **six (6) months** from the date of execution of this Master Agreement. In the event that Contractor fails to secure the requisite Certifications/Test Results for each device the Contractor is qualified for within six (6) months from the date of execution of this Master Agreement, Contractor may be required to refund the Authority and/or Permitted Purchaser, as set forth in the Work Order, in full for the Total Maximum Amount of PSBN Devices purchased under a Work Order, within sixty (60) business days of notification from the Authority that Contractor's Master Agreement is being Terminated for Default in accordance with this Paragraph 47.0;

- Contractor fails to provide a Warranty Period for any PSBN Devices, purchased under the Request for Bid process, that is extended by the time period it takes Contractor to complete all the Minimum Qualifications regarding Certifications/Test Results pursuant to Exhibit A (PSBN Device Categories), and such Certifications/Test Results were received and approved by the Authority;

- Contractor fails to be responsible at its sole cost, with providing the Authority with compliant PSBN Devices that pass certification, and fails to be responsible for making any changes needed to devices already deployed to meet certification, which may include but is not limited to, field modification of any deployed devices, or a complete replacement of a device if needed;

- Contractor fails to be responsible for any harm the PSBN Devices cause to the PSBN System, and Contractor fails to be responsible for all costs associated with restoring the PSBN System to a fully operational condition; or

- Contractor fails to be solely responsible for any and all costs associated with device Certifications/Test Results.

Vendor's who are interested in either (1) submitting a new SOQ or (2) replacing the revised SOQ Form 1 and SOQ Form 3.1 – 3.8 shall submit one (1) original hard copy (titled ORIGINAL) and one (1) electronic copy on a CD/DVD/USB drive (in Work, Excel, PDF format, as applicable).

Since the Authority will accept Statements of Qualifications (SOQs) on an ongoing basis throughout the duration of the Master Agreement to qualify Vendors, it is in a Vendor's and/or Qualified Contractor's best interest to check www.la-rics.org and http://camisvr.co.la.ca.us/lacobids/ for any updates to this RFSQ. Except as expressly modified by this Addendum B, all other terms and conditions of this RFSQ shall remain unchanged.

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

Respectfully submitted,

PATRICK J. MALLON
EXECUTIVE DIRECTOR

MS:jh
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c: Counsel to the Authority

VENDOR ORGANIZATION/CERTIFICATION

Vendor shall fully complete, execute, and submit this certification as part of its Statement of Qualifications (SOQ) as set forth in the Request for Statement of Qualifications (RFSQ). By submitting its SOQ in response to the RFSQ, the Vendor acknowledges and agrees as follows:

1. Vendor's Organizational Information

Please complete, date and sign this form and include it in Section 2.5.4 of the SOQ. The person signing the form must be authorized to sign on behalf of the Vendor and to bind the applicant in a Master Agreement.

A. If your firm is a corporation or limited liability company (LLC), state its legal name (as found in your Articles of Incorporation) and State of incorporation:

_____	_____	_____
Name	State	Year Inc.

B. If your firm is a limited partnership or a sole proprietorship, state the name of the proprietor or managing partner:

_____

C. If your firm is doing business under one or more DBA's, please list all DBA's and the County(s) of registration:

Name	County of Registration	Year became DBA
_____	_____	_____
_____	_____	_____

D. Is your firm wholly or majority owned by, or a subsidiary of, another firm? ____ If yes,

Name of parent firm: _____

State of incorporation or registration of parent firm: _____

E. Please list any other names your firm has done business as within the last five (5) years.

Name	Year of Name Change
_____	_____
_____	_____

F. Indicate if your firm is involved in any pending acquisition/merger, including the associated company name. If not applicable, so indicate below.

_____

_____

Applicant acknowledges that if any false, misleading, incomplete, or deceptively unresponsive statements in connection with this SOQ are made, the SOQ may be rejected. The evaluation and determination in this area shall be at the Executive Director's sole judgment and his/her judgment shall be final.

Corporation's Name: _____

Address:_____

Email address:_____ Telephone number:_____

Fax number: _____

2. Compliance with Mandatory Minimum Requirements

By checking the boxes below, Vendor acknowledges and certifies that it meets and complies with all of the Mandatory Minimum Requirements set forth in Section 1.6 (Mandatory Minimum Requirements for All Vendors) of the RFSQ.

☐ **Section 1.6.1 – Vendor has not been debarred in the last three (3) years by any public agency in the United States.**

☐ **Section 1.6.2 – Vendor has not been barred at any time, for reasons of national security, by any agency of the federal government, from bidding on a contract, participating in an auction for frequencies, or receiving a grant.**

☐ **Section 1.6.3 – Vendor has not been identified at any time, as a security threat, or potential security threat, to the United States, by any agency in the federal government or any committee or subcommittee of Congress.**

3. Truth and Accuracy of Representations

The Vendor certifies that to the best of Vendor's knowledge and belief, all information contained in its SOQ is true, complete and correct. If a Vendor includes any materially false statements in its SOQ, the Authority may reject the SOQ, as determined by the Authority in its sole discretion.

4. Acceptance of Terms and Conditions

Vendor understands and agrees that its submission of a SOQ constitutes acknowledgment and acceptance of, and a willingness to comply with, all the terms and conditions of this RFSQ, its Appendices, including without limitation, Appendix D (Sample Master Agreement), and any RFSQ Addenda, including but not limited to Addendum B, which changed certain terms and conditions of the RFSQ and Master Agreement, which are incorporated into and are deemed part of the RFSQ.

5. Compliance with Laws

In responding to the LA-RICS PSBN Devices RFSQ and in performing any agreement the Vendor may enter into as a result of the RFSQ, the Vendor certifies that it shall comply with all applicable federal, state and local laws, ordinances, regulations, rules, guidelines, directives, policies and procedures (collectively, "Applicable Laws"). Applicable Laws include, but are not limited to, the Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112-96) and applicable provisions of the Los Angeles County Code and the Los Angeles Administrative Code. Applicable Laws additionally include , but are not limited to, those referred to in the RFSQ, including, but not limited to, those relating to child support compliance (Los Angeles County Code Chapter 2.200), conflict of interest (Los Angeles County Code Chapter 2.180.010), defaulted property tax reduction (Los Angeles County Code Chapter 2.206), lobbying (Los Angeles County Code Chapter 2.160), anti-discrimination (Civil Rights laws), jury service (Los Angeles County Code Chapter 2.203), non-responsibility and debarment (Chapter 2.202 of the Los Angeles County Code), debarment (45 C.F.R. Part 76), earned income credit (IRS Notice 1015) and all requirements of law referred to in Appendix F (Grant Funding Requirements) to Appendix D (Sample Master Agreement).

6. No Collusion

The Vendor certifies that (a) its SOQ is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; (b) its SOQ is genuine and not collusive or a sham; (c) the Vendor has not directly or indirectly induced or solicited any other Vendor to put in a false or sham SOQ, and has not directly or indirectly colluded, conspired, connived, or agreed with any other Vendor or anyone else to put in a sham SOQ or to cause anyone to refrain from proposing, or to secure any advantage against the Authority for anyone interested in the resultant Master Agreement, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, bid depositor, or to any member or agent thereof to effectuate a collusion or sham SOQ.

7. Conflict of Interest

a. The Vendor certifies that (a) the Vendor is aware of and has read Section 2.180.010 of the Los Angeles County Code and;

b. There are no existing conflicts of interest, as set forth in Section 2.180.010 of the Los Angeles County Code that would prohibit the Vendor from submitting a SOQ. The Vendor additionally certifies that it has no other known potential conflicts of interest other than as set forth below:

_____

_____

_____

Finally, the Vendor certifies that neither it nor any of its subcontractors, under agreement, assisted the Authority in developing and/or evaluating this RFSQ.

8. Lobbyist Ordinance

The Vendor certifies that (a) each County Lobbyist, as defined by the Los Angeles County Code Section 2.160.010, retained by the Vendor is in full compliance with Chapter 2.160 of the Los Angeles County Code, and (b) each such County Lobbyist is not on the List of Terminated registered Lobbyists maintained by the County of Los Angeles Executive Office of the Board of Supervisors.

9. Defaulted Property Tax Reduction Program

The Vendor certifies that the Vendor is familiar with the terms of the County of Los Angeles Defaulted Property Tax Reduction Program, Los Angeles County Code Chapter 2.206, and either:

a. To the best of Vendor's knowledge, after reasonable inquiry, the Vendor is not in default, as that term is defined in Los Angeles County Code Section 2.206.020.E, on any Los Angeles County property tax obligation, and (ii) the Vendor agrees to comply with the County's Defaulted Property Tax Reduction Program during the term of any resultant Master Agreement, or

b. The Vendor is exempt from the County of Los Angeles Defaulted Property Tax Reduction Program, pursuant to Los Angeles County Code Section 2.206.060, for the following reasons:

_____

_____

_____

10. Community Business Enterprises and Small Business Enterprises

Vendor has attached to this Appendix A (Vendor Organization/Certification): (a) as Attachment A-1, Vendor's fully completed and executed certification of CBE/SBE participation; and (b) as Attachment A-2, documentation supporting the criteria set forth in Section 1.36 (Community Business Enterprises and Small Business Enterprises) of the RFSQ. Without limiting Section 3 (Truth and Accuracy of Representations) of this SOQ Form 1 (Vendor Organization/Certification) of Appendix A (Required Forms), Vendor certifies that to the best of Vendor 's knowledge and belief, all information attached as Attachment A-1 and Attachment A-2 are true, complete and correct.

11. Release of Liability

The Vendor shall release, discharge, defend, hold harmless and indemnify the Authority, its Members, and their respective officers, employees, agents, advisors, and representatives to provide a reference or other information to the Authority, from and against any and all liability, claims, actions and damages that may arise from the provision of such reference or information to the Authority.

12. Debarment

The Vendor certifies that Vendor, any of Vendor's owners, officers, partners, directors, or other principals, and Vendor's Subcontractors are not currently debarred, suspended, declared ineligible or excluded from securing State of California or federally funded contracts by any department or agency.

13. Grant Funding Requirements

It is anticipated that various government Funding Resources comprising municipal, state, federal and/or local grants or other funds will be used to pay for devices, including any Work to be performed by the selected Vendor under the resultant Master Agreement. Vendor agrees to adhere to all requirements imposed by the Authority's receipt of these Funding Resources, including those described in Exhibit F (Grant Funding Requirements) of Appendix D (Sample Master Agreement).

I am _____ (Vendor's authorized representative) of _____ (Vendor Organization's name), the party making the foregoing SOQ.

I hereby certify under penalty of perjury under the laws of the State of California that the contents of this Vendor Certification are true and accurate and the contents of this SOQ are in full compliance with this Vendor Organization/Certification and all of the requirements of the

LA-RICS PSBN Devices RFSQ, including without limitation the terms and conditions of Appendix D (Sample Master Agreement).

This Vendor Organization/Certification is executed this _____ _____ (date) at _____(city and state) by the undersigned under penalty of perjury under the laws of the State of California.

_____	_____
Signature	Internal Revenue Service Employer Identification Number
_____	_____
Title	California Business License Number
_____	_____
Date	County WebVen Number

Attachment A-1: Certification of CBE and SBE Participation

CCOMMUNITY BUSINESS ENTERPRISE (CBE) AND SMALL BUSINESS ENTERPRISE (SBE)FIRM/ORGANIZATION INFORMATION

INSTRUCTIONS: All Vendors responding to this solicitation must return this form with its SOQ as instructed in the RFSQ. The information requested below is for statistical purposes only. On final analysis and consideration of award, contractor/vendor will be selected without regard to gender, race, creed, or color.

I. TYPE OF BUSINESS STRUCTURE:_____

(Non-Profit, Corporation, Partnership, Sole Proprietorship, etc.)

If vendor is a Non-Profit, please skip Sections II through V and fill in the name of the firm and sign on page 2.

II. TOTAL NUMBER OF EMPLOYEES IN FIRM (including owners): _____

III. RACE/ETHNIC COMPOSITION OF FIRM: (Partners, Associate Partners, Managers, Staff, etc.): Please distribute the above total number of employees into the following categories:

	OWNERS/PARTNERS/ ASSOCIATES/PARTNERS		Managers	Staff
	Male	Female		
Black/African American				
Hispanic/Latino				
Asian or Pacific Islander				
American Indian/Alaskan Native				
Filipino American				
White				

IV. PERCENTAGE OF OWNERSHIP IN FIRM: Please indicate by percentage (%) how ownership of the firm is distributed.

	Black/ African American	Hispanic/ Latino	Asian or Pacific Islander	American Indian/ Alaskan Native	Filipino American	White
Men	%	%	%	%	%	%
Women	%	%	%	%	%	%

V. CERTIFICATION AS MINORITY, WOMEN DISADVANTAGED, DISABLED VETERAN – OWNED AND SMALL BUSINESS ENTERPRISES: Is your firm currently certified as a minority, women, disadvantaged, disabled veteran-owned or small business enterprise by a public agency? (If yes, complete the following and attach a copy of your proof of certification.)

	M	W	D	DV	S	
Agency_____	___	___	___	___	___	Expiration Date_____
Agency_____	___	___	___	___	___	Expiration Date_____
Agency_____	___	___	___	___	___	Expiration Date_____
Agency_____	___	___	___	___	___	Expiration Date_____
Agency_____	___	___	___	___	___	Expiration Date_____

Legend: M = Minority; W = Women; D = Disadvantaged; DV = Disabled Veterans; S = Small

COMMUNITY BUSINESS ENTERPRISE (CBE) AND SMALL BUSINESS ENTERPRISE (SBE) COMBINED TOTALS FOR LEAD FIRMS AND SUBCONSULTANTS

VI. NUMBER OF MINORITIES AND WOMEN EMPLOYED: Date:_____

This form to be completed ONLY by the lead firm:

Lead Firm Name:_____

(Aggregate the numbers on this form for ALL THE FIRMS included in your SOQ)

Project:_____

Employees Categories	**Staff & Management on this Project**	
	Male	**Female**
1. Black/African American		
2. Hispanic/Latin American		
3. Asian/Pacific Islander		
4. Filipino		
5. American Indian/Alaskan Native		
6. All Others		
7. **Total** (Sum of items 1-6)		

VII. PROPOSED PERCENTAGE OF TOTAL CONTRACT VALUE TO CBE/SBE SUB-CONSULTANTS ON THIS PROJECT:

Firm Name/Address	**Indicate MBE/WBE/DBE or DVBE or SBE**	**Percentage of Total Contract Value**

Attachment A-2: Documentation Supporting Criteria Set forth in Section 1.36 (Community Business Enterprises and Small Business Enterprises)

[NOTICE TO RFSQ VENDORS: Vendor to attach supporting documentation as instructed in Section 1.36 (Community Business Enterprises and Small Business Enterprises) of the RFSQ.]

PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 1 – IN-VEHICLE ROUTERS

Description	Device Form Factor	Use
Router with multiple modems, including at least Band Class 14, and additional options such as Ethernet, USB and Wi-Fi connectivity.	• Typical: 5.5 x 6.0 x 1.9 inches. Or other sizes to meet specific vehicle installation needs such as a motorcycle • Mountable • Heat baffles for cooling • External connectors for antenna(s) • External ports for Ethernet connectivity • External USB ports	Installed in a vehicle it provides the data session connectivity for the vehicle's devices. • Primary use is for internal first responder systems and applications to access the B14 LTE system or secondary LTE carrier to connect internal vehicle equipment via Ethernet, USB or Wi-Fi and enhance coverage through the use of an external antenna(s). • Primary Vehicles to use this variant will be Police cars, Police SUVs, Police Motorcycles, Fire Trucks, other fire vehicles, Paramedic vehicles, patrol and fire boats, and possibly helicopters

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
LTE RF Elements					
1.1	Device must support Band Class 14 (BC14_UE).	X			
1.2	Device is a Power Class 3 UE.	X			
1.3	BC14_UE is a 3GPP Category 3 or 4 device.				
1.4	BC14_UE has external antenna ports to allow for vehicle rooftop mounting of antenna for all functions – MIMO LTE, Wi-Fi and GPS.	X			
1.5a	Device simultaneously supports B14 and one commercial wireless carrier operations.	X			
1.5b	Device can simultaneously support two commercial carriers. Identify each carrier supported.				
1.6	Device can simultaneously support B14 and two or more commercial wireless carrier operations (desired). Identify each carrier supported.				
1.7	Device is supplied with Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.	X			
UE Characteristics					
1.8	LTE modem(s) can be installed in the device is the field without voiding its warranty	~~X~~			
1.9	UICC(s) can be installed in the device in the field without voiding its warranty	X			
1.10	There is a unique UICC for each mobile service provider (LTE band) supported in the device.				
1.11	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X			

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
1.12	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X			
1.13	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	X			
1.14	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.				
1.15	Device operational ambient temperature of -22 to 170 degrees Fahrenheit or better is desired. Test certification must be on record with the LA-RICS Authority.				
1.16	Device must pass shock resistant to 90 cm drop on any of six sides. MIL SPEC 810. Test certification must be on record with the LA-RICS Authority.	X			
1.17	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	X			
1.18	Device has at least one Ethernet RJ-45 port (10/100/1000).	X			
1.19	Device has two or more Ethernet RJ-45 ports (10/100/1000).				
1.20	Device has one or more USB 2.0 ports.	X			
1.21	Device has one or more USB 3.0 ports.				
1.22	Device supports an OBD- II interface.				
1.23	Device supports HDOBD interface.				
1.24	Device must be certified IEC 60529 or equivalent for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	~~X~~			

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
1.25	Device must be certified IEC 60529 or equivalent for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority				
1.26	Installation kit, mounting hardware and instructions required to maintain UL and other applicable safety certification(s).				
1.27	Power accessories: All necessary parts including, but not limited to connectors and harnesses to power the vendor's router via a nominal 10 - 30 VDC power source (e.g. vehicle battery).	X			
1.28	Antenna for LTE operations across all supported bands with 3G fallback, Mag mount with ground plane, 15 ft (or similar) antenna cabling with connectors.				
1.29	GPS SMA Mag-Mount antenna				
1.30	Wi-Fi SMA Mag-Mount antenna				
1.31	7-foot Ethernet cable available as an option or procured separately				
1.32	Connector accessory: A locking mechanism for connectors to solidly fasten USB to device.				
1.33	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X			
1.34	Provide installation documentation and limited training for 3rd party installation vendors	~~X~~			
Motorcycle Specific UE Requirements					
1.35	Device is certified vibration resistant for motorcycle transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	~~X~~			
1.36	Device has a small profile suitable for mounting on a motorcycle.	~~X~~			
1.37	Device accessories necessary for mounting on a motorcycle including power cabling, antenna, and miscellaneous hardware.	~~X~~			

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
Wi-Fi and Bluetooth					
1.38	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n in the 2.4GHz band.	X			
1.39	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n with operations in both 2.4 and 5.8 GHz bands.				
1.40	UE supports Wi-Fi offload and may or may not support session persistence.				
1.41	EIRP of device exceeds 17 dBm with supported MIMO configuration				
1.42	EIRP of device exceeds 24 dBm with supported MIMO configuration				
1.43	The device supports Wi-Fi Access Point (STA) protocol IEEE 802.11a in the 4.9 GHz band.				
1.44	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.				
1.45	EIRP of device exceeds 17 dBm with supported MIMO configuration				
1.46	EIRP of device exceeds 24 dBm with supported MIMO configuration				
1.47	The device supports Wi-Fi Access Point (AP) protocol IEEE 802.11a in the 4.9 GHz band.				
1.48	The device may support Wi-Fi Station (STA) protocol IEEE 802.11a in the 4.9 GHz band.				
1.49	The device supports WPA2-Enterprise				
1.50	If the device has WPS capability, it must support disabling that feature.	X			
1.51	The device supports at least one SSID.				
1.52	The device supports multiple SSIDs.				

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
1.53	The device is capable of non-broadcast or hidden SSIDs.				
1.54	The device supports Bluetooth 4.0 or higher.				
1.55	The device supports the IEEE 802.11s mesh networking amendment to the IEEE 802.11 specification.				
GPS					
1.56	The device supports autonomous (standalone) 3-channel, or higher GPS solution.				
1.57	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).				
1.58	The device supports autonomous 12-channel, or higher GPS and GPS augmentation (WAAS).				
1.59	The device support autonomous GPS (USA GPS) and at least one other satellite system (e.g., Galileo, European GPS) and GPS augmentation.				
1.60	The GPS position is refreshed at a rate of 5 Hz or faster.				
1.61	The GPS position is refreshed rate of 1 Hz or faster.				
Device Management					
1.62	The device policies are settable via OMA-DM 1.2v (or higher) compliant managers.	~~X~~			
1.63	Device supports LA-RICS certified extensions to the OMA DM Management Information Bases (MIBs).				
1.64	The device provisioning may be settable via vendor's proprietary Web-based management.				
Applications					
1.65	Device is compatible and tested with NetMotion's Locality software.				

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
1.66	An LTE performance application is supported by the device supplier				
1.67	Vendor supported Automatic Vehicular Location (AVL) device client. Management may be via OMA-DM 1.2v or Web based.				
UE Security					
1.68	The device utilizes a trusted boot.	~~X~~			
1.69	The device utilizes a hardware root of trust and trusted boot.				
1.70	The device utilizes a hardware root of trust and trusted boot, and attestation.				
1.71	The UE supports Advanced Authentication (AA) as defined by CJIS security policies. Ref: http://www.fbi.gov/about-us/cjis/RequirementsDocument.pdf				
1.72	The device is FIPS 140-2 security class level 1certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.				
1.73	The device must meet FIPS 140-2 security class level 2 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.				
UI Interface					
1.74	Device includes an integral speaker(s) that is louder than customary in consumer devices. Decibels to be defined.				
1.75	Device uses noise cancellation technology.				
1.76	User interface (UI) display is designed for outdoor use with brighter screen than found on consumer devices.				
1.77	Device touchscreen operates successfully with gloves on.				

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
Certification (Note 1,2)					
1.78	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X			
1.79	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X			
1.80	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X			
1.81	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X			
1.82	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X			
1.83	Device must be ~~**certified to be**~~ interoperable with the Motorola/Mformation device management system. Test cases will be consistent with Interoperability test cases in the OMA document: "Enabler Test Specification for Device Management", Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X			

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
1.84	Device must be *conformance* tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X			
1.85	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X			

Note:

1.) As part of LA-RICS acceptance testing (post-PTCRB certification) should test with included antenna(s) supplied with device as applicable.
2.) If a certified mPCI modem is utilized within the device, then the modem certification will carry over to the next higher assembly.

PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 2 – USB MODEMS

Description	Device Form Factor	Use
USB modem that provides LTE radio connectivity for devices that support USB modems.	USB, 3.7 X 1.3 X 0.5 inches or other sizes as defined by the manufacturer	USB connection into laptops (MDTs), tablets, and in-vehicle routers to provide LTE connectivity.

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	USB Modems Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
	LTE RF Elements				
2.1	Device supports Band Class 14 (BC14_UE).	X			
2.2	Device is a Power Class 3 UE.	X			
2.3	BC14_UE is a 3GPP Category 3 or 4 device.	X			
2.4	BC14_UE has external antenna ports.				
2.5	External antenna kit (if applicable).				
	UE Characteristics				
2.6	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X			
2.7	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X			
2.8	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	~~X~~			
2.9	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.				
2.10	The device meets USB 3.0 specifications.				
2.11	List any accessories that are supported for this device such as anchor bracket, an extension USB cord, etc.				
2.12	The device supplier shall provide connection manager software (driver) that operates with the USB modem. These driver(s) shall be indicate which operating system(s) are supported and have been verified (e.g.; Windows 7)	X			

Reference No.	USB Modems Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
2.13	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X			
	eUICC Management				
2.14	If the USB only uses an eUICC or embedded SIM then the UICC specifications apply for this device.	X			
	Certification				
2.15	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X			
2.16	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X			
2.17	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	~~X~~			
2.18	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X			

Reference No.	USB Modems Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
2.19	Device must be *conformance* tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X			
2.20	Device must be *acceptance* tested by LA-RICS. Detailed test plan will be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X			

PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 3 – SMARTPHONES

Description	Device Form Factor	Use
LTE Smart Phone that operates on Band Class 14 as well as at least one other carriers networks.	• Typical: 5.55 x 2.97 x 0.53 inches • Minimum 4.7 inch touch screen. • Ports for Audio headphones • Micro USB • Controls for volume, power, etc. • Hardened Case and screen • Speakerphone capability	Handheld smart phone for data and non-mission critical voice services. • Hardened for rugged use

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
LTE RF Elements					
3.0	Device must support Band Class 14 (BC14_UE).	X			
3.1	Device is a Power Class 3 UE.	X			
3.2	BC14_UE is a 3GPP Category 3 or 4 device.				
3.3	BC14_UE has external antenna ports to allow for vehicle rooftop mounting of antenna for all functions – MIMO LTE, Wi-Fi and GPS				
3.4	Device supports B14 and one commercial wireless carrier operations as an alternate when B14 is not available	X			
3.5a	Device can support B14 and two or more commercial wireless carrier operations as alternates when B14 is not available (desired). Identify each carrier supported.				
3.5b	Device can simultaneously support two commercial wireless carriers. Identify each carrier supported.				
3.6	Device accessories: Device is supplied with docking station, Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.				
UE Characteristics					
3.7	UICC(s) can be installed in the device in the field without voiding its warranty	X			
3.8	There is a unique UICC for each mobile service provider (LTE band) supported in the device.				
3.9	The device should be able to support virtual SIMs (multiple profiles) on a single UICC slot.				
3.10	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X			

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.11	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X			
3.12	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	X			
3.13	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.				
3.14	Device must pass MIL SPEC 810 G test for shock resistant to 90 cm drop on any of six sides. Test certification must be on record with the LA-RICS Authority.	X			
3.15	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.				
3.16	Device has one or more Micro-USB, USB 2.0, or USB 3.0 connector.	X			
3.17	Device must be certified IEC 60529 for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	~~X~~			
3.18	Device must be certified IEC 60529 for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority.				
3.19	Power accessories: All necessary parts for powering device including AC/DC power adapter brick and cord for 100-240 VAC, 50-60Hz power source. Specify your minimum and maximum battery life during idle and working conditions and recharging time.	X			
3.20	Power accessories: additional replaceable battery and battery charger.				

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.21	Identify and recommend accessories that work with and support of the unit such as 1.) Micro USB cable 2.) Wired head phones 3.) Bluetooth head phones 4.) Vehicle charger 5.) Vehicle cradle 6.) External cases 7.) Screen covers 8.) Holster smartphone holder 9.) External port extender cradle to enable connection to external antenna 10.) External antenna 11.) Installation kit				
3.22	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.				
3.23	Identify the processor and memory configuration (and options) used in the device. LA-RICS would prefer to internal memory storage at least 32GB that is expandable up to 128GB.				
3.24	Identify the current OS (operating system) used with the smartphone device. LA-RICS recommends that the smartphone device support the current OS and be software upgradable to the next OS.				
Wi-Fi and Bluetooth					
3.25	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n in the 2.4GHz band.				
3.26	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n with operations in both 2.4 and 5.8 GHz bands.				
3.27	Device supports Wi-Fi offload and may or may not support session persistence.				

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.28	EIRP of device exceeds 17 dBm with supported MIMO configuration				
3.29	EIRP of device exceeds 24 dBm with supported MIMO configuration				
3.30	The device supports Wi-Fi Access Point (STA) protocol IEEE 802.11a in the 4.9 GHz band.				
3.31	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.				
3.32	EIRP of device exceeds 17 dBm with supported MIMO configuration				
3.33	EIRP of device exceeds 24 dBm with supported MIMO configuration				
3.34	The device supports Wi-Fi Access Point (AP) protocol IEEE 802.11a in the 4.9 GHz band.				
3.35	The device may support Wi-Fi Station (STA) protocol IEEE 802.11a in the 4.9 GHz band.				
3.36	The device supports WPA2-Enterprise				
3.37	If the device has WPS capability, it must support disabling that feature.	X			
3.38	The device supports at least one SSID				
3.39	The device supports multiple SSIDs				
3.40	The device is capable of non-broadcast or hidden SSIDs.				
3.41	The device supports Bluetooth 4.0 or higher.				
GPS					
3.42	The device supports autonomous (standalone) 3-channel, or higher GPS solution.				
3.43	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).	X			
3.44	The device supports autonomous 12-channel, or higher GPS and GPS augmentation (WAAS).				
3.45	The device support autonomous GPS (USA GPS) and at least one other satellite system (e.g., Galileo, European GPS) and GPS augmentation				

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.46	The GPS position is refreshed at a rate of 5 Hz or faster. High sampling rate required for high-speed vehicles.				
3.47	The GPS position is refreshed rate of 1 Hz or faster.				
	Device Management				
3.48	The device policies are settable via OMA-DM 1.2v (or higher) compliant managers.	~~X~~			
3.49	Device supports LA-RICS certified extensions to the OMA DM Management Information Bases (MIBs).	~~X~~			
3.50	The device provisioning may be settable via vendor's proprietary Web-based management.				
	Applications				
3.51	Device is compatible and tested with NetMotion's Locality software.				
3.52	An LTE performance application is supported by the device supplier				
3.53	Vendor supported push-to-talk (PTT) device client is managed by OMA-DM 1.2v compliant server.				
3.54	Vendor supported Automatic Vehicular Location (AVL) device client. Management may be via OMA-DM 1.2v, or Web based.				
3.55	Vendor supported weather client.				
3.56	Vendor supported Internet Browser.				
3.57	Circuit switched voice or VoLTE.	X			
3.58	Vendor supported VoIP application (SIP based).				
3.59	Vendor supported Messaging (SMS and MMS).	X			
3.60	Vendor supported CMAS client.	X			
3.61	Vendor supported email client.	X			
	UE Security				
3.62	The device utilizes a trusted boot.				
3.63	The device utilizes a hardware root of trust and trusted boot.				

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.64	The device utilizes a hardware root of trust and trusted boot, and attestation				
3.65	The UE supports Advanced Authentication (AA) as defined by CJIS security policies. Ref: http://www.fbi.gov/about-us/cjis/RequirementsDocument.pdf				
3.66	The device is FIPS 140-2 security class level 1certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.				
3.67	The device must meet FIPS 140-2 security class level 2 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.				
UI Interface					
3.68	Device includes an integral speaker(s) that is louder than customary in consumer devices. Describe the Decibels of your handset	X			
3.69	Device uses noise cancellation technology.	X			
3.70	User interface (UI) display is designed for outdoor use with brighter screen than found on consumer devices.	X			
3.71	Device touchscreen operates successfully with gloves on.				
Certification					
3.72	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X			
3.73	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X			
3.74	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X			
3.75	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X			

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
3.76	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X			
3.77	Device must be ~~**certified to be**~~ interoperable with the device management system. Test cases will be consistent with Interoperability test cases in the OMA document: "Enabler Test Specification for Device Management", Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X			
3.78	Device must be *conformance* tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X			
3.79	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X			

PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 4 – TABLETS

Description	Device Form Factor	Use
Rugged tablet computer.	Typical: 9.0 x 6.5 x 1.3 inches or other suitable dimension as specified by the manufacturer • USB ports • Power ports • Battery • Hardened Case • Touch screen • Ability to add external keyboard	May be fixed in a vehicle, or carried by a First Responder. Multiple screen sizes to meet implementation applications.

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			Yes	No	
LTE RF Elements					
4.1	Device must support Band Class 14 (BC14_UE).	X			
4.2	Device is a Power Class 3 UE.	X			
4.3	BC14_UE is a 3GPP Category 3 or 4 device.				
4.4	BC14_UE has external antennae ports to allow for vehicle rooftop mounting of antennae for all functions – MIMO LTE, Wi-Fi and GPS.				
4.5	Device simultaneously supports B14 and one commercial wireless carrier operations. Identify each carrier supported.	X			
4.6	Device can simultaneously support B14 and two or more commercial wireless carrier operations (desired). Identify each carrier supported.				
4.7	Device accessories: Device is supplied with docking station, Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.				
4.8	Provide installation documentation and limited training for 3rd party installation vendors	~~X~~			
UE Characteristics					
4.9	LTE modem(s) can be installed in the device is the field without voiding its warranty.				
4.10	UICC(s) can be installed in the device in the field without voiding its warranty.				
4.11	There is a unique UICC for each mobile service provider (LTE band) supported in the device.				
4.12	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X			

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			Yes	No	
4.13	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X			
4.14	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	~~X~~			
4.15	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.				
4.16	Device must pass shock resistant to 90 cm drop on any of six sides. MIL SPEC 810. Test certification must be on record with the LA-RICS Authority.	X			
4.17	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.				
4.18	Device has two or more Ethernet RJ-45 ports (10/100/1000).				
4.19	Device has one Ethernet RJ-45 ports (10/100/1000).				
4.20	Device has one or more USB 2.0 and/or USB 3.0 ports.				
4.21	Device must be certified IEC 60529 for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	~~X~~			
4.22	Device must be certified IEC 60529 for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority. Specify your minimum and maximum battery life during idle and working conditions including charging time.				
4.23	Power accessories: All necessary parts for powering device including AC/DC power adapter brick and cord for 100-240 VAC, 50-60Hz power source.	X			

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			Yes	No	
4.24	Connector accessory: A locking mechanism for connectors – USB and RJ-45.				
4.25	Identify and recommend accessories that work with and support of the unit such as 1.) AC/DC power charger 2.) Replacement Batteries 3.) External cases 4.) Screen protection 5.) External keyboard 6.) External monitor 7.) USB cords 8.) Passive cradle 9.) Port adapter cradle 10.) External antenna adapter 11.) Wired head phones 12.) Bluetooth headphones				
4.25	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.				
4.26	Identify the Memory configuration and the processor used in the device. LA-RICS would prefer to have 128 GB memory with 4GB RAM available on the tablet device				
	Wi-Fi and Bluetooth				
4.27	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n in the 2.4GHz band.	X			
4.28	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n with operations in both 2.4 and 5.8 GHz bands.	X			
4.29	Device supports Wi-Fi offload and may or may not support session persistence.				

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			Yes	No	
4.30	EIRP of device exceeds 17 dBm with supported MIMO configuration	X			
4.31	EIRP of device exceeds 24 dBm with supported MIMO configuration.				
4.32	The device supports Wi-Fi Access Point (STA) protocol IEEE 802.11a in the 4.9 GHz band.				
4.33	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.				
4.34	EIRP of device exceeds 17 dBm with supported MIMO configuration.				
4.35	EIRP of device exceeds 24 dBm with supported MIMO configuration.				
4.36	The device supports Wi-Fi Access Point (AP) protocol IEEE 802.11a in the 4.9 GHz band.				
4.37	The device may support Wi-Fi Station (STA) protocol IEEE 802.11a in the 4.9 GHz band.				
4.38	The device supports WPA2-Enterprise.				
4.39	If the device has WPS capability, it must support disabling that feature.	X			
4.40	The device supports at least one SSID.				
4.41	The device supports multiple SSIDs.				
4.42	The device is capable of non-broadcast or hidden SSIDs.				
4.43	The device supports Bluetooth 4.0 or higher.				
GPS					
4.44	The device supports autonomous (standalone) 3-channel, or higher GPS solution.				

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			Yes	No	
4.45	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).	X			
4.46	The device supports autonomous 12-channel, or higher GPS and GPS augmentation (WAAS).				
4.47	The device support autonomous GPS (USA GPS) and at least one other satellite system (e.g., Galileo, European GPS) and GPS augmentation				
4.48	The GPS position is refreshed at a rate of 5 Hz or faster.				
4.49	The GPS position is refreshed rate of 1 Hz or faster.				
Device Management					
4.50	The device policies are settable via OMA-DM 1.2v (or higher) compliant managers.	~~X~~			
4.51	Device supports LA-RICS certified extensions to the OMA DM Management Information Bases (MIBs).				
4.52	The device provisioning may be settable via vendor's proprietary Web-based management.				
Applications					
4.53	Device is compatible and tested with NetMotion's Locality software.				
4.54	An LTE performance application is supported by the device supplier				
4.55	Vendor supported push-to-talk (PTT) device client is managed by OMA-DM 1.2v compliant server.				
4.56	Vendor supported Automatic Vehicular Location (AVL) device client. Management may be via OMA-DM 1.2v, or Web based.				
4.57	Vendor supported weather client.				
4.58	Vendor supported Internet Browser.				

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			Yes	No	
4.59	Vendor supported VoIP application (SIP based).				
4.60	Vendor supported Messaging (SMS and MMS).				
4.61	Vendor supported CMAS client.				
4.62	Vendor supported email client.				
4.63	Vendor to identify the common business enterprise software that is supported on the device (i.e. Microsoft Office Suite, Adobe, etc.).				
UE Security					
4.64	The device utilizes a trusted boot.	~~X~~			
4.65	The device utilizes a hardware root of trust and trusted boot.				
4.66	The device utilizes a hardware root of trust and trusted boot, and attestation				
4.67	The UE supports Advanced Authentication (AA) as defined by CJIS security policies. Ref: http://www.fbi.gov/about-us/cjis/RequirementsDocument.pdf				
4.68	The device is FIPS 140-2 security class level 1certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.				
4.69	The device must meet FIPS 140-2 security class level 2 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.				
UI Interface					
4.70	Device includes an integral speaker(s) that is louder than customary in consumer devices. Decibels to be defined.				
4.71	Device uses noise cancellation technology.				
4.72	User interface (UI) display is designed for outdoor use with brighter screen than found on consumer devices.				
4.73	Device touchscreen operates successfully with gloves on.				

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			Yes	No	
4.74	Vendor to identify other user interfaces that are offered and supported on the tablet. LA-RICS would prefer that the tablet device support a digitized pen with "click" button features and the ability to write on the device instantly on most software programs and documents.				
	Certification Note 1				
4.75	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X			
4.76	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X			
4.77	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X			
4.78	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X			
4.79	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. Specific test suites to be provided by LARICS. Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X			

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			Yes	No	
4.80	Device must be ~~certified to be~~ interoperable with the Mformation device management system. Test cases will be consistent with Interoperability test cases in the OMA document: "Enabler Test Specification for Device Management", Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X			
4.81	Device must be *conformance* tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X			
4.82	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X			

Note:

1.) As part of LA-RICS acceptance testing (post-PTCRB certification) should test with included antenna(s) supplied with device as applicable.

PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 5 – OUTDOOR UNITS (ODU)

Description	Device Form Factor	Use
Fixed outdoor LTE CPE (ODU). Ethernet cable is used to connect users to the ODU.	Outdoor device typically small profile • e.g. 4.7 x 8.5 x 2.6 inches.	Fixed to an exterior wall of a building providing LTE connectivity for one or more computers inside the building. Optimal placement and high-gain antennae provides superior performance.

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	Outdoor Units Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	No	
LTE RF Elements					
5.1	Device supports Band Class 14 (BC14_UE).	X			
5.2	Device is a Power Class 3 UE.	X			
5.3	BC14_UE is a 3GPP Category 3 or 4 device.				
5.4	High-gain Antenna kit is supplied (unless antennae are internal).				
5.5	Provide installation documentation and training for 3rd party installation vendors.	~~X~~			
UE Characteristics					
5.6	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X			
5.7	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X			
5.8	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	~~X~~			
5.9	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.				
5.10	Device has Ethernet RJ-45 ports (10/100/1000).	X			
5.11	Power to the ODU is provided using over Power over Ethernet (PoE). All necessary accessories are provided to support this functionality.	X			
5.12	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X			
eUICC Management					
5.13	If the ODU only uses an eUICC or embedded SIM then the UICC specifications apply for this device.	X			
Certification Note 1, 2					

Reference No.	Outdoor Units Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	No	
5.14	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X			
5.15	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X			
5.16	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority. Identify each carrier supported.	~~X~~			
5.17	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X			
5.18	Device must be *conformance* tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X			
5.19	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.				

Note:
1.) As part of LA-RICS acceptance testing (post-PTCRB certification) should test with included antenna(s) supplied with device as applicable
2.) If a certified mPCI modem is utilized within the device, then the modem certification will carry over to the next higher assembly.

PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 6 – PORTABLE HOTSPOTS

Description	Device Form Factor	Use
Portable Hotspot with single or multiple LTE modems with Wi-Fi and micro-USB connectivity.	• Typical: 4.05 x 2.88 x 0.34 inches. 4.26 ounces or other suitable dimensions based on manufacture design. • Multiple USB port access • AC/DC Power adapter • Battery • UICC slot	Allows the sharing of a device's LTE data connection with other devices on the same network.

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
LTE RF Elements					
6.1	Device must support Band Class 14 (BC14_UE).	X			
6.2	Device is a Power Class 3 UE.	X			
6.3	BC14_UE is a 3GPP Category 3 or 4 device.				
6.4	BC14_UE has external antennae ports to allow for vehicle rooftop mounting of antennae for all functions – MIMO LTE, Wi-Fi and GPS.				
6.5	Device simultaneously supports B14 and one commercial wireless carrier operations. Identify each carrier supported.				
6.6	Device can simultaneously support B14 and two or more commercial wireless carrier operations (desired). Identify each carrier supported.				
6.7	Device is supplied with Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.				
6.8	Provide installation documentation and training for 3rd party installation vendors.				
UE Characteristics					
6.9	UICC(s) can be installed in the device in the field without voiding its warranty.	~~X~~			
6.10	There is a unique UICC for each mobile service provider (LTE band) supported in the device.				
6.11	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X			
6.12	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X			

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
6.13	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	~~X~~			
6.14	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.				
6.15	Device operational ambient temperature of -22 to 170 degrees Fahrenheit or better is desired. Test certification must be on record with the LA-RICS Authority.				
6.16	Device must pass shock resistant to 90 cm drop on any of six sides. MIL SPEC 810. Test certification must be on record with the LA-RICS Authority.	X			
6.17	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	X			
6.18	Device has at least one Ethernet RJ-45 port (10/100/1000).				
6.19	Device has one or more microUSB 2.0 ports.	X			
6.20	Device has one or more microUSB 3.0 ports.				
6.21	Device must be certified IEC 60529 or equivalent for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	~~X~~			
6.22	Device must be certified IEC 60529 or equivalent for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority				
6.23	Battery designed to operate unit longer than 10 hours on a single charge.				
6.24	Power accessories: All cords and components necessary to power portable hotspot via standard 110-120v AC receptacle.	X			

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
6.25	Removable battery designed to operate greater than 10 hours on a single charge; plus spare battery and external battery charger.				
6.26	Power accessories: All necessary parts including, but not limited to connectors and harnesses to power the portable hotspot via a nominal 10 - 30 VDC power source (e.g. vehicle battery) are supplied with the unit. As well as replacement batteries				
6.27	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X			
	Motorcycle Specific UE Requirements				
6.28	Device is certified vibration resistant for motorcycle transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	~~X~~			
6.29	Device has a small profile suitable for mounting on a motorcycle.	~~X~~			
6.30	Device accessories necessary for mounting on a motorcycle including power cabling, antennae, and miscellaneous hardware.	~~X~~			
	Wi-Fi and Bluetooth				
6.31	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n in 2.4 GHz band	X			
6.32	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.				
6.33	EIRP of device exceeds 17 dBm with supported MIMO configuration				
6.34	EIRP of device exceeds 24 dBm with supported MIMO configuration				
6.34	The device supports WPA2-Enterprise				
6.35	If the device has WPS capability, it must support disabling that feature.	X			
6.36	The device supports at least one SSID	X			
6.37	The device supports multiple SSIDs				

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
6.38	The device is capable of non-broadcast or hidden SSIDs.				
6.39	The device supports Bluetooth 4.0 or higher.				
GPS					
6.40	The device supports autonomous (standalone) 3-channel, or higher GPS solution.				
6.41	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).				
UE Security					
6.42	Device is able to support VPN data flows	X			
UI Interface					
6.43	User interface (UI) display is designed for outdoor use with brighter screen or display than found on typical consumer devices.				
6.44	Device touchscreen operates successfully with gloves on.				
Certification					
6.45	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X			
6.46	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X			
6.47	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X			
6.48	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	~~X~~			

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
6.49	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X			
6.50	Device must be ~~**certified to be**~~ interoperable with the Motorola device management system. Test cases will be consistent with Interoperability test cases in the OMA document: "Enabler Test Specification for Device Management", Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X			
6.51	Device must be *conformance* tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X			
6.52	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X			

PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 7 – mPCIe LTE MODEMS

Description	Device Form Factor	Use	Special Note
LTE modem that provides the LTE radio connectivity for devices.	mPCIe (Full mini F1) 2.0 x 1.18 x 0.2 inches	Embedded in laptops (MDTs), tablets, and routers (esp. mounted in vehicles) to provide LTE connectivity.	The modem requires a UICC.

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	mPCIe LTE Modem Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	No	
LTE RF Elements					
7.1	Device supports Band Class 14 (BC14_UE).	X			
7.2	Device is a Power Class 3 UE.	X			
7.3	BC14_UE is a 3GPP Category 3 or 4 device.	X			
7.4	BC14_UE has external antenna ports	X			
7.5	Device simultaneously supports B14 and one commercial wireless carrier operations. Identify each carrier supported.	X			
7.6a	Device simultaneously supports B14 and two or more commercial wireless carrier operations. Identify each carrier supported.				
7.6b	Device can simultaneously support two commercial wireless carriers. Identify each carrier supported.				
UE Characteristics					
7.7	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X			
7.8	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X			
7.9	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	X			
7.10	Device meets operational ambient conditions of temperature of -22 to 170 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.				
7.11	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X			
eUICC Management					
7.12	If the mPCIe only uses an eUICC or embedded SIM then the UICC specifications apply for this device.	X			

Reference No.	mPCIe LTE Modem Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	No	
	Certification Note 1				
7.13	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X			
7.14	Device must be FCC Part 15 certified assuming Wi-Fi or Bluetooth functionality. Test certification must be on record with the LA-RICS Authority.	~~X~~			
7.15	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X			
7.16	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X			
7.17	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X			
7.18	Device must be *conformance* tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X			

Reference No.	mPCIe LTE Modem Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	No	
7.19	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X			

Note:

1.) As part of LA-RICS acceptance testing (post-PTCRB certification) should test with included antenna(s) supplied with device as applicable.

PSBN DEVICE CATEGORIES COMPLIANCE MATRIX

CATEGORY 8 – UICC

VENDOR NAME: _____

DEVICE NAME: _____

DEVICE MODEL: _____

DEVICE VERSION: _____

Reference No.	UICC Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
Manufacturing and Ordering					
8.1	The vendor shall provide Pre-order support for LA-RICS in defining file templates for UICC personalization along with agreed upon inventory card labeling with ICCID and SKU.	X			
8.2	The vendor shall provide a working UICC sample for LA-RICS acceptance.	X			
8.3	The vendor will provide order management system or method from LA-RICS for quantities of standalone UICCs.	X			
8.4	Vendor shall support standard low volume orders, such as a minimum quantity of one hundred (100) UICCs per order.	~~X~~			
8.5	The vendor shall provide a process for tracking and reporting LA-RICS orders, including orders based on individual UICC serial numbers.	X			
8.6	The vendor shall provide a detailed step by step ordering and delivery process.				
Special Requirements					
8.7	The vendor shall provide UICC components which are compliant with specification: 3GPP TS 31.101 UICC-Terminal interface; Physical and logical characteristics.	X			
8.8	The vendor shall provide UICC components which are compliant with specification: 3GPP TS 31.102 Technical Specifications Group Terminal; Characteristics of the USIM application.	X			
8.9	The vendor shall provide UICC components which are compliant with specification: 3GPP TS 31.103 Characteristics of the IP Multimedia Services Identity Module (ISIM) Application.	X			
8.10	The vendor shall provide UICC components which are compliant with specification: 3GPP TS 31.111: USIM Application Toolkit (USAT).	X			
8.11	The vendor shall provide UICC components which are compliant with specification: 3GPP TS 31.116: Remote APDU Structure for USIM Toolkit Applications.	X			

Reference No.	UICC Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
8.12	The vendor shall provide UICC components which are compliant with specification: ETSI TS 102 221 Smart Cards UICC-Terminal Interface; Physical and Logical Characteristics.	X			
8.13	The vendor shall provide UICC components which are compliant with specification: ETSI TS 102 223 Smart cards; Card Application Toolkit (CAT).	X			
Security					
8.14	The vendor shall possess and maintain GSMA SAS (Security Accreditation Scheme) accreditation.	X			
8.15	The vendor shall generate, store, and transport secret information in a secure environment and use secured interfaces and file formats.	X			
8.16	Proprietary and/or sensitive information, such as security and authentication keys, shall be generated and maintained in a facility which is operated within the United States.	X			
Profile					
8.17	The vendor shall create a UICC profile for the LA-RICS PSBN. The profile shall include application functions and file structures supported on the UICC. A preliminary profile is provided in Table 1 "Preliminary UICC attribute list".	X			
8.18	The UICC profile shall include the USIM application.	X			
8.19	The UICC profile shall include the ISIM application to support future IMS network access support.	X			
8.20	The UICC profile shall support Remote File and Application Management.	X			
Form Factor					
8.21	The vendor shall provide UICC components compliant with the 2FF (Mini) plug-in form factor.	X			
8.22	The vendor shall provide UICC components compliant with the 3FF (Micro) plug-in form factor.	X			

Reference No.	UICC Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
8.23	The vendor shall provide UICC components which operate across the following temperature ranges: 2FF: -40 °C to +105 °C 3FF: -25 °C to +85 °C	X			
8.24	The UICC shall support IMEI locking. IMEI locking is the ability to lock the SIM card to a specific UE.	~~X~~			
8.25	Each UICC shall have a unique identifier, such as a serial number. The identifier shall be printed on the card and have a corresponding bar code.	X			
8.26	The vendor shall provide UICC components which are compatible with a variety of commercial mobile operating systems, such as Windows Mobile, Linux, and Android, etc.	X			
8.27	The vendor shall specify a minimum and recommended memory in the UICC card. At a minimum two different configurations shall be provided to cater to data devices and Smartphone classes of devices.	X			
8.28	Supply voltage range shall support all 3 classes of voltage range from 1.8v to 5v.	X			
Applications					
8.29	UICC vendor shall provide specifications for the programming cycles, programming time and data retention time for variety of UICC SIM products offered.	X			
8.30	The vendor shall provide a list of supported applications and aplets for their UICCs.	X			
Provisioning					
8.31	The vendor shall generate Subscriber provisioning files for LA-RICS.	X			
8.32	The vendor shall support a Subscriber provisioning file format which is compatible with the LA-RICS subscriber provisioning system.	X			
8.33	The vendor's Subscriber provisioning files shall be transmitted to LARICS using secured interfaces and encrypted formats.	X			
8.34	The vendor shall provide a secure process for entry of UICC output file with keys, etc. (i.e. K_i) into LA-RICS HSS. See Figure 1.	X			
Certification					

Reference No.	UICC Requirements	Device Mandatory Minimum Qualifications (X = Yes)	Vendor's Device Compliant? (Vendor shall mark column with X)		Vendor Comments
			YES	NO	
8.35	The vendor shall provide certification of compatibility and operability with LA-RICS User Devices and the LA-RICS network.	~~X~~			
8.36	The vendor will provide GSMS SAS-certified manufacturing and personalization of ordered UICCs, based upon LA-RICS personalization template and customer order entry information.	X			
End State					
8.37	The end state is a provisioned LTE network and functional UE. Refer to Figure 1 for the conceptual process and Table 2 for SOW timeline.				

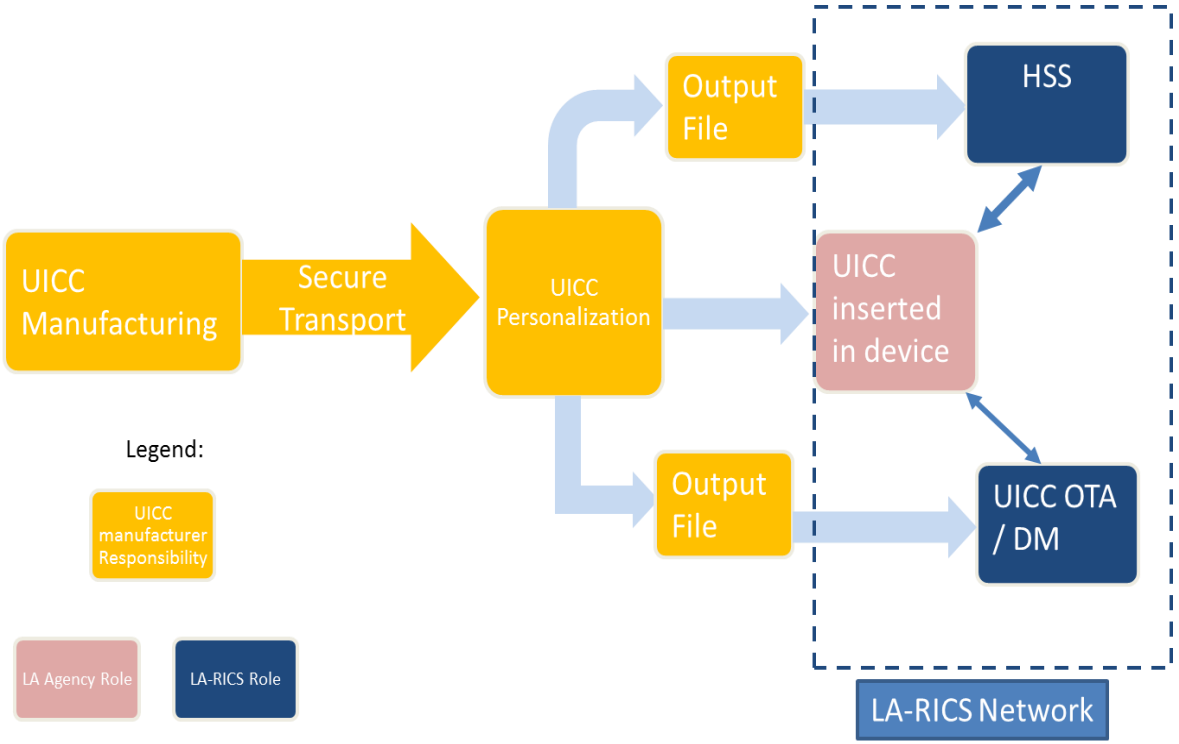
UICC Manufacturing
Secure Transport
UICC Personalization
Output File
Output File
HSS
UICC inserted in device
UICC OTA / DM
LA-RICS Network
Legend:
UICC manufacturer Responsibility
LA Agency Role
LA-RICS Role

FIGURE 1: [1]

TABLE 1:

Field	Value	Notes
MCC	313	
MNC	100	
MSIN	*{454850000 – 454899999}*	Sub-range to be provided at time of order
Operator name	"LA-RICS"	Arbitrary string no longer than 10 characters.
Operator key (OP_key)	TBD	Loaded into HSS and UICC. Exact value under
K_i Key	*Private, created during UICC process*	Shared private key created during UICC manufacturing process. Resides in both HSS and UICC. Secure process required by vendor
Special Access Control Class	• All First Responder UICCs will be programmed with AC = 14 and 13 and 12 and [0-9].	Emergency services Access Class.
	• [0-9] is randomly assigned, as is customary today with consumer UICCs.	
	• Local PS policy will determine if the AC is different for secondary responders.	
PIN / PUK	4-digits / 8-digits	Personal Identification Number (PIN) and PIN Unlocking Key (PUK) Value
Device Manager APN	mgmt.losangco.ca.apn.epc. mnc100.mcc313.3gppnetwork.org	
Local APN	publicsafety.losang.ca.apn.epc. mnc100.mcc313.3gppnetwork.org	
Diameter Realm	losangco.ca.epc.	
Form Factors	{2FF, 3FF}	Derived from device specified.

TABLE 2 – SOW:

No.	Deliverable	Date
1	Vendor UICC Specification Document	2 weeks from start date
2	• Pre-order support with LA-RICS:	4 weeks from start date
	• UICC personalization template	
	• Inventory plan: UICC marking plan with ICCID and SKU	
	• Working UICC sample for LA-RICS acceptance tests	
3	UICC working samples	6 weeks from start date
4	Order management and delivery process with LA-RICS for quantities of standalone UICCs.	6 weeks from start date
5	Secure process for entry of UICC output file with keys, etc. (i.e. Ki) into LA-RICS HSS.	8 weeks from start date
6	Secure process for entry of UICC output file into UICC OTA device management system.	8 weeks from start date
7	Certification Test Plan and Execution	8 weeks from start date
8	Commence Production	12 weeks from start date

PSBN DEVICE CATEGORIES

CONTRACTOR NAME: _____

MASTER AGREEMENT NO. _____

As of _____, 2015, Contractor is qualified in the following PSBN Device Category(ies) as identified by marked box(es):

☐ CATEGORY 1: In-Vehicle Routers

☐ CATEGORY 2: USB Modems

☐ CATEGORY 3: Smartphones

☐ CATEGORY 4: Tablets

☐ CATEGORY 5: Outdoor Units

☐ CATEGORY 6: Portable Hotspots

☐ CATEGORY 7: mPCIe LTE Modems

☐ CATEGORY 8: Universal Integrated Circuit Cards (UICC)

PSBN DEVICE CATEGORIES

CATEGORY 1 – IN-VEHICLE ROUTERS

Description	Device Form Factor	Use
Router with multiple modems, including at least Band Class 14, and additional options such as Ethernet, USB and Wi-Fi connectivity.	• Typical: 5.5 x 6.0 x 1.9 inches. Or other sizes to meet specific vehicle installation needs such as a motorcycle • Mountable • Heat baffles for cooling • External connectors for antenna(s) • External ports for Ethernet connectivity • External USB ports	Installed in a vehicle it provides the data session connectivity for the vehicle's devices. • Primary use is for internal first responder systems and applications to access the B14 LTE system or secondary LTE carrier to connect internal vehicle equipment via Ethernet, USB or Wi-Fi and enhance coverage through the use of an external antenna(s). • Primary Vehicles to use this variant will be Police cars, Police SUVs, Police Motorcycles, Fire Trucks, other fire vehicles, Paramedic vehicles, patrol and fire boats, and possibly helicopters.

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	LTE RF Elements	
1.1	Device must support Band Class 14 (BC14_UE).	X
1.2	Device is a Power Class 3 UE.	X
1.3	BC14_UE is a 3GPP Category 3 or 4 device.	
1.4	BC14_UE has external antenna ports to allow for vehicle rooftop mounting of antenna for all functions – MIMO LTE, Wi-Fi and GPS.	X
1.5a	Device simultaneously supports B14 and one commercial wireless carrier operations.	X
1.5b	Device can simultaneously support two commercial carriers. Identify each carrier supported.	

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)
1.6	Device can simultaneously support B14 and two or more commercial wireless carrier operations (desired). Identify each carrier supported.	
1.7	Device is supplied with Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.	X
	UE Characteristics	
1.8	LTE modem(s) can be installed in the device is the field without voiding its warranty	~~X~~
1.9	UICC(s) can be installed in the device in the field without voiding its warranty	X
1.10	There is a unique UICC for each mobile service provider (LTE band) supported in the device.	
1.11	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X
1.12	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X
1.13	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	X
1.14	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	
1.15	Device operational ambient temperature of -22 to 170 degrees Fahrenheit or better is desired. Test certification must be on record with the LA-RICS Authority.	
1.16	Device must pass shock resistant to 90 cm drop on any of six sides. MIL SPEC 810. Test certification must be on record with the LA-RICS Authority.	X
1.17	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	X
1.18	Device has at least one Ethernet RJ-45 port (10/100/1000).	X
1.19	Device has two or more Ethernet RJ-45 ports (10/100/1000).	
1.20	Device has one or more USB 2.0 ports.	X
1.21	Device has one or more USB 3.0 ports.	
1.22	Device supports an OBD- II interface.	
1.23	Device supports HDOBD interface.	
1.24	Device must be certified IEC 60529 or equivalent for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	~~X~~

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)
1.25	Device must be certified IEC 60529 or equivalent for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority	
1.26	Installation kit, mounting hardware and instructions required to maintain UL and other applicable safety certification(s).	
1.27	Power accessories: All necessary parts including, but not limited to connectors and harnesses to power the vendor's router via a nominal 10 - 30 VDC power source (e.g. vehicle battery).	X
1.28	Antenna for LTE operations across all supported bands with 3G fallback, Mag mount with ground plane, 15 ft (or similar) antenna cabling with connectors.	
1.29	GPS SMA Mag-Mount antenna	
1.30	Wi-Fi SMA Mag-Mount antenna	
1.31	7-foot Ethernet cable available as an option or procured separately	
1.32	Connector accessory: A locking mechanism for connectors to solidly fasten USB to device.	
1.33	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X
1.34	Provide installation documentation and limited training for 3rd party installation vendors	~~X~~
	Motorcycle Specific UE Requirements	
1.35	Device is certified vibration resistant for motorcycle transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	~~X~~
1.36	Device has a small profile suitable for mounting on a motorcycle.	~~X~~
1.37	Device accessories necessary for mounting on a motorcycle including power cabling, antenna, and miscellaneous hardware.	~~X~~
	Wi-Fi and Bluetooth	
1.38	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n in the 2.4GHz band.	X
1.39	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n with operations in both 2.4 and 5.8 GHz bands.	
1.40	UE supports Wi-Fi offload and may or may not support session persistence.	
1.41	EIRP of device exceeds 17 dBm with supported MIMO configuration	
1.42	EIRP of device exceeds 24 dBm with supported MIMO configuration	
1.43	The device supports Wi-Fi Access Point (STA) protocol IEEE 802.11a in the 4.9 GHz band.	
1.44	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.	
1.45	EIRP of device exceeds 17 dBm with supported MIMO configuration	

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)
1.46	EIRP of device exceeds 24 dBm with supported MIMO configuration	
1.47	The device supports Wi-Fi Access Point (AP) protocol IEEE 802.11a in the 4.9 GHz band.	
1.48	The device may support Wi-Fi Station (STA) protocol IEEE 802.11a in the 4.9 GHz band.	
1.49	The device supports WPA2-Enterprise	
1.50	If the device has WPS capability, it must support disabling that feature.	X
1.51	The device supports at least one SSID.	
1.52	The device supports multiple SSIDs.	
1.53	The device is capable of non-broadcast or hidden SSIDs.	
1.54	The device supports Bluetooth 4.0 or higher.	
1.55	The device supports the IEEE 802.11s mesh networking amendment to the IEEE 802.11 specification.	
GPS		
1.56	The device supports autonomous (standalone) 3-channel, or higher GPS solution.	
1.57	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).	
1.58	The device supports autonomous 12-channel, or higher GPS and GPS augmentation (WAAS).	
1.59	The device support autonomous GPS (USA GPS) and at least one other satellite system (e.g., Galileo, European GPS) and GPS augmentation.	
1.60	The GPS position is refreshed at a rate of 5 Hz or faster.	
1.61	The GPS position is refreshed rate of 1 Hz or faster.	
Device Management		
1.62	The device policies are settable via OMA-DM 1.2v (or higher) compliant managers.	~~X~~
1.63	Device supports LA-RICS certified extensions to the OMA DM Management Information Bases (MIBs).	
1.64	The device provisioning may be settable via vendor's proprietary Web-based management.	
Applications		
1.65	Device is compatible and tested with NetMotion's Locality software.	
1.66	An LTE performance application is supported by the device supplier	
1.67	Vendor supported Automatic Vehicular Location (AVL) device client. Management may be via OMA-DM 1.2v or Web based.	
UE Security		
1.68	The device utilizes a trusted boot.	~~X~~

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)
1.69	The device utilizes a hardware root of trust and trusted boot.	
1.70	The device utilizes a hardware root of trust and trusted boot, and attestation.	
1.71	The UE supports Advanced Authentication (AA) as defined by CJIS security policies. Ref: http://www.fbi.gov/about-us/cjis/RequirementsDocument.pdf	
1.72	The device is FIPS 140-2 security class level 1certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.	
1.73	The device must meet FIPS 140-2 security class level 2 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.	
UI Interface		
1.74	Device includes an integral speaker(s) that is louder than customary in consumer devices. Decibels to be defined.	
1.75	Device uses noise cancellation technology.	
1.76	User interface (UI) display is designed for outdoor use with brighter screen than found on consumer devices.	
1.77	Device touchscreen operates successfully with gloves on.	
1.78	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X
1.79	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X
1.80	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X
1.81	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X
1.82	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X
1.83	Device must be ~~**certified to be**~~ interoperable with the Motorola/Mformation device management system. Test cases will be consistent with Interoperability test cases in the OMA document: "Enabler Test Specification for Device Management", Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X

Reference No.	In-Vehicle Router Requirements	Device Mandatory Minimum Qualifications (X = Yes)
1.84	Device must be *conformance* tested on the LA-RICS network by the vendor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the vendor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X
1.85	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X

Note:

1.) As part of LA-RICS acceptance testing (post-PTCRB certification) should test with included antenna(s) supplied with device as applicable.
2.) If a certified mPCI modem is utilized within the device, then the modem certification will carry over to the next higher assembly.

PSBN DEVICE CATEGORIES

CATEGORY 2 – USB MODEMS

Description	Device Form Factor	Use
USB modem that provides LTE radio connectivity for devices that support USB modems.	USB, 3.7 X 1.3 X 0.5 inches or other sizes as defined by the manufacturer	USB connection into laptops (MDTs), tablets, and in-vehicle routers to provide LTE connectivity.

Reference No.	USB Modems Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	LTE RF Elements	
2.1	Device supports Band Class 14 (BC14_UE).	X
2.2	Device is a Power Class 3 UE.	X
2.3	BC14_UE is a 3GPP Category 3 or 4 device.	X
2.4	BC14_UE has external antenna ports.	
2.5	External antenna kit (if applicable).	
	UE Characteristics	
2.6	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X
2.7	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X
2.8	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	~~X~~
2.9	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	
2.10	The device meets USB 3.0 specifications.	
2.11	List any accessories that are supported for this device such as anchor bracket, an extension USB cord, etc.	
2.12	The device supplier shall provide connection manager software (driver) that operates with the USB modem. These driver(s) shall be indicate which operating system(s) are supported and have been verified (e.g.; Windows 7)	X
2.13	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X

Reference No.	USB Modems Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	eUICC Management	
2.14	If the USB only uses an eUICC or embedded SIM then the UICC specifications apply for this device.	X
	Certification	
2.15	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X
2.16	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X
2.17	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	~~X~~
2.18	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X
2.19	Device must be *conformance* tested on the LA-RICS network by the Contractor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the Contractor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X
2.20	Device must be *acceptance* tested by LA-RICS. Detailed test plan will be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X

PSBN DEVICE CATEGORIES

CATEGORY 3 – SMARTPHONES

Description	Device Form Factor	Use
LTE Smart Phone that operates on Band Class 14 as well as at least one other carriers networks.	• Typical: 5.55 x 2.97 x 0.53 inches • Minimum 4.7 inch touch screen. • Ports for Audio headphones • Micro USB • Controls for volume, power, etc. • Hardened Case and screen • Speakerphone capability	Handheld smart phone for data and non-mission critical voice services. • Hardened for rugged use

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
LTE RF Elements		
3.0	Device must support Band Class 14 (BC14_UE).	X
3.1	Device is a Power Class 3 UE.	X
3.2	BC14_UE is a 3GPP Category 3 or 4 device.	
3.3	BC14_UE has external antenna ports to allow for vehicle rooftop mounting of antenna for all functions – MIMO LTE, Wi-Fi and GPS	
3.4	Device supports B14 and one commercial wireless carrier operations as an alternate when B14 is not available	X
3.5a	Device can support B14 and two or more commercial wireless carrier operations as alternates when B14 is not available (desired). Identify each carrier supported.	
3.5b	Device can simultaneously support two commercial wireless carriers. Identify each carrier supported.	
3.6	Device accessories: Device is supplied with docking station, Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.	
UE Characteristics		
3.7	UICC(s) can be installed in the device in the field without voiding its warranty	X
3.8	There is a unique UICC for each mobile service provider (LTE band) supported in the device.	
3.9	The device should be able to support virtual SIMs (multiple profiles) on a single UICC slot.	

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
3.10	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X
3.11	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X
3.12	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	X
3.13	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	
3.14	Device must pass MIL SPEC 810 G test for shock resistant to 90 cm drop on any of six sides. Test certification must be on record with the LA-RICS Authority.	X
3.15	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	
3.16	Device has one or more Micro-USB, USB 2.0, or USB 3.0 connector.	X
3.17	Device must be certified IEC 60529 for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	~~X~~
3.18	Device must be certified IEC 60529 for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority.	
3.19	Power accessories: All necessary parts for powering device including AC/DC power adapter brick and cord for 100-240 VAC, 50-60Hz power source. Specify your minimum and maximum battery life during idle and working conditions and recharging time.	X
3.20	Power accessories: additional replaceable battery and battery charger.	
3.21	Identify and recommend accessories that work with and support of the unit such as 1.) Micro USB cable 2.) Wired head phones 3.) Bluetooth head phones 4.) Vehicle charger 5.) Vehicle cradle 6.) External cases 7.) Screen covers 8.) Holster smartphone holder 9.) External port extender cradle to enable connection to external antenna 10.) External antenna 11.) Installation kit	

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
3.22	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	
3.23	Identify the processor and memory configuration (and options) used in the device. LA-RICS would prefer to internal memory storage at least 32GB that is expandable up to 128GB.	
3.24	Identify the current OS (operating system) used with the smartphone device. LA-RICS recommends that the smartphone device support the current OS and be software upgradable to the next OS.	
	Wi-Fi and Bluetooth	
3.25	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n in the 2.4GHz band.	
3.26	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n with operations in both 2.4 and 5.8 GHz bands.	
3.27	Device supports Wi-Fi offload and may or may not support session persistence.	
3.28	EIRP of device exceeds 17 dBm with supported MIMO configuration	
3.29	EIRP of device exceeds 24 dBm with supported MIMO configuration	
3.30	The device supports Wi-Fi Access Point (STA) protocol IEEE 802.11a in the 4.9 GHz band.	
3.31	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.	
3.32	EIRP of device exceeds 17 dBm with supported MIMO configuration	
3.33	EIRP of device exceeds 24 dBm with supported MIMO configuration	
3.34	The device supports Wi-Fi Access Point (AP) protocol IEEE 802.11a in the 4.9 GHz band.	
3.35	The device may support Wi-Fi Station (STA) protocol IEEE 802.11a in the 4.9 GHz band.	
3.36	The device supports WPA2-Enterprise	
3.37	If the device has WPS capability, it must support disabling that feature.	X
3.38	The device supports at least one SSID	
3.39	The device supports multiple SSIDs	
3.40	The device is capable of non-broadcast or hidden SSIDs.	
3.41	The device supports Bluetooth 4.0 or higher.	
	GPS	
3.42	The device supports autonomous (standalone) 3-channel, or higher GPS solution.	
3.43	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).	X
3.44	The device supports autonomous 12-channel, or higher GPS and GPS augmentation (WAAS).	
3.45	The device support autonomous GPS (USA GPS) and at least one other satellite system (e.g., Galileo, European GPS) and GPS augmentation	

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
3.46	The GPS position is refreshed at a rate of 5 Hz or faster. High sampling rate required for high-speed vehicles.	
3.47	The GPS position is refreshed rate of 1 Hz or faster.	
	Device Management	
3.48	The device policies are settable via OMA-DM 1.2v (or higher) compliant managers.	~~X~~
3.49	Device supports LA-RICS certified extensions to the OMA DM Management Information Bases (MIBs).	~~X~~
3.50	The device provisioning may be settable via Contractor's proprietary Web-based management.	
	Applications	
3.51	Device is compatible and tested with NetMotion's Locality software.	
3.52	An LTE performance application is supported by the device supplier	
3.53	Contractor supported push-to-talk (PTT) device client is managed by OMA-DM 1.2v compliant server.	
3.54	Contractor supported Automatic Vehicular Location (AVL) device client. Management may be via OMA-DM 1.2v, or Web based.	
3.55	Contractor supported weather client.	
3.56	Contractor supported Internet Browser.	
3.57	Circuit switched voice or VoLTE.	X
3.58	Contractor supported VoIP application (SIP based).	
3.59	Contractor supported Messaging (SMS and MMS).	X
3.60	Contractor supported CMAS client.	X
3.61	Contractor supported email client	X
	UE Security	
3.62	The device utilizes a trusted boot.	
3.63	The device utilizes a hardware root of trust and trusted boot.	
3.64	The device utilizes a hardware root of trust and trusted boot, and attestation	
3.65	The UE supports Advanced Authentication (AA) as defined by CJIS security policies. Ref: http://www.fbi.gov/about-us/cjis/RequirementsDocument.pdf	
3.66	The device is FIPS 140-2 security class level 1certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.	
3.67	The device must meet FIPS 140-2 security class level 2 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.	
	UI Interface	
3.68	Device includes an integral speaker(s) that is louder than customary in consumer devices. Describe the Decibels of your handset	X

Reference No.	Smartphone Requirements	Device Mandatory Minimum Qualifications (X = Yes)
3.69	Device uses noise cancellation technology.	X
3.70	User interface (UI) display is designed for outdoor use with brighter screen than found on consumer devices.	X
3.71	Device touchscreen operates successfully with gloves on.	
	Certification	
3.72	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X
3.73	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X
3.74	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X
3.75	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X
3.76	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X
3.77	Device must be ~~**certified to be**~~ interoperable with the device management system. Test cases will be consistent with Interoperability test cases in the OMA document: "Enabler Test Specification for Device Management", Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X
3.78	Device must be *conformance* tested on the LA-RICS network by the Contractor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the Contractor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X
3.79	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X

PSBN DEVICE CATEGORIES

CATEGORY 4 – TABLETS

Description	Device Form Factor	Use
Rugged tablet computer.	Typical: 9.0 x 6.5 x 1.3 inches or other suitable dimension as specified by the manufacturer • USB ports • Power ports • Battery • Hardened Case • Touch screen • Ability to add external keyboard	May be fixed in a vehicle, or carried by a First Responder. Multiple screen sizes to meet implementation applications.

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)
LTE RF Elements		
4.1	Device must support Band Class 14 (BC14_UE).	X
4.2	Device is a Power Class 3 UE.	X
4.3	BC14_UE is a 3GPP Category 3 or 4 device.	
4.4	BC14_UE has external antennae ports to allow for vehicle rooftop mounting of antennae for all functions – MIMO LTE, Wi-Fi and GPS.	
4.5	Device simultaneously supports B14 and one commercial wireless carrier operations. Identify each carrier supported.	X
4.6	Device can simultaneously support B14 and two or more commercial wireless carrier operations (desired). Identify each carrier supported.	
4.7	Device accessories: Device is supplied with docking station, Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.	
4.8	Provide installation documentation and limited training for 3rd party installation vendors	~~X~~
4.9	LTE modem(s) can be installed in the device is the field without voiding its warranty.	
UE Characteristics		
4.10	UICC(s) can be installed in the device in the field without voiding its warranty.	
4.11	There is a unique UICC for each mobile service provider (LTE band) supported in the device.	

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)
4.12	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X
4.13	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X
4.14	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	~~X~~
4.15	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	
4.16	Device must pass shock resistant to 90 cm drop on any of six sides. MIL SPEC 810. Test certification must be on record with the LA-RICS Authority.	X
4.17	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	
4.18	Device has two or more Ethernet RJ-45 ports (10/100/1000).	
4.19	Device has one Ethernet RJ-45 ports (10/100/1000).	
4.20	Device has one or more USB 2.0 and/or USB 3.0 ports.	
4.21	Device must be certified IEC 60529 for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	~~X~~
4.22	Device must be certified IEC 60529 for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority. Specify your minimum and maximum battery life during idle and working conditions including charging time.	
4.23	Power accessories: All necessary parts for powering device including AC/DC power adapter brick and cord for 100-240 VAC, 50-60Hz power source.	X
4.24	Connector accessory: A locking mechanism for connectors – USB and RJ-45.	
4.25	Identify and recommend accessories that work with and support of the unit such as 1.) AC/DC power charger 2.) Replacement Batteries 3.) External cases 4.) Screen protection 5.) External keyboard 6.) External monitor 7.) USB cords 8.) Passive cradle 9.) Port adapter cradle 10.) External antenna adapter 11.) Wired head phones 12.) Bluetooth headphones	

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)
4.25	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	
4.26	Identify the Memory configuration and the processor used in the device. LA-RICS would prefer to have 128 GB memory with 4GB RAM available on the tablet device	
	Wi-Fi and Bluetooth	
4.27	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n in the 2.4GHz band.	X
4.28	Device supports Wi-Fi station (STA) protocol IEEE 802.11b/g/n with operations in both 2.4 and 5.8 GHz bands.	X
4.29	Device supports Wi-Fi offload and may or may not support session persistence.	
4.30	EIRP of device exceeds 17 dBm with supported MIMO configuration	X
4.31	EIRP of device exceeds 24 dBm with supported MIMO configuration.	
4.32	The device supports Wi-Fi Access Point (STA) protocol IEEE 802.11a in the 4.9 GHz band.	
4.33	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.	
4.34	EIRP of device exceeds 17 dBm with supported MIMO configuration.	
4.35	EIRP of device exceeds 24 dBm with supported MIMO configuration.	
4.36	The device supports Wi-Fi Access Point (AP) protocol IEEE 802.11a in the 4.9 GHz band.	
4.37	The device may support Wi-Fi Station (STA) protocol IEEE 802.11a in the 4.9 GHz band.	
4.38	The device supports WPA2-Enterprise.	
4.39	If the device has WPS capability, it must support disabling that feature.	X
4.40	The device supports at least one SSID.	
4.41	The device supports multiple SSIDs.	
4.42	The device is capable of non-broadcast or hidden SSIDs.	
4.43	The device supports Bluetooth 4.0 or higher.	
	GPS	
4.44	The device supports autonomous (standalone) 3-channel, or higher GPS solution.	
4.45	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).	X
4.46	The device supports autonomous 12-channel, or higher GPS and GPS augmentation (WAAS).	
4.47	The device support autonomous GPS (USA GPS) and at least one other satellite system (e.g., Galileo, European GPS) and GPS augmentation	
4.48	The GPS position is refreshed at a rate of 5 Hz or faster.	
4.49	The GPS position is refreshed rate of 1 Hz or faster.	
	Device Management	
4.50	The device policies are settable via OMA-DM 1.2v (or higher) compliant managers.	~~X~~

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)
4.51	Device supports LA-RICS certified extensions to the OMA DM Management Information Bases (MIBs).	
4.52	The device provisioning may be settable via Contractor's proprietary Web-based management.	
	Applications	
4.53	Device is compatible and tested with NetMotion's Locality software.	
4.54	An LTE performance application is supported by the device supplier.	
4.55	Contractor supported push-to-talk (PTT) device client is managed by OMA-DM 1.2v compliant server.	
4.56	Contractor supported Automatic Vehicular Location (AVL) device client. Management may be via OMA-DM 1.2v, or Web based.	
4.57	Contractor supported weather client	
4.58	Contractor supported Internet Browser	
4.59	Contractor supported VoIP application (SIP based)	
4.60	Contractor supported Messaging (SMS and MMS)	
4.61	Contractor supported CMAS client.	
4.62	Contractor supported email client.	
4.63	Contractor to identify the common business enterprise software that is supported on the device (i.e. Microsoft Office Suite, Adobe, etc.).	
	UE Security	
4.64	The device utilizes a trusted boot.	~~X~~
4.65	The device utilizes a hardware root of trust and trusted boot.	
4.66	The device utilizes a hardware root of trust and trusted boot, and attestation.	
4.67	The UE supports Advanced Authentication (AA) as defined by CJIS security policies. Ref: http://www.fbi.gov/about-us/cjis/RequirementsDocument.pdf	
4.68	The device is FIPS 140-2 security class level 1certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.	
4.69	The device must meet FIPS 140-2 security class level 2 certified by an accredited Cryptographic Module Testing laboratory. Test certification must be on record with the LA-RICS Authority.	
	UI Interface	
4.70	Device includes an integral speaker(s) that is louder than customary in consumer devices. Decibels to be defined.	
4.71	Device uses noise cancellation technology.	
4.72	User interface (UI) display is designed for outdoor use with brighter screen than found on consumer devices.	
4.73	Device touchscreen operates successfully with gloves on.	
4.74	Contractor to identify other user interfaces that are offered and supported on the tablet. LA-RICS would prefer that the tablet device support a digitized pen with "click" button features and the ability to write on the device instantly on most software programs and documents.	

Reference No.	Tablet Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	Certification [Note 1]	
4.75	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X
4.76	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X
4.77	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X
4.78	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X
4.79	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X
4.80	Device must be ~~**certified to be**~~ interoperable with the Mformation device management system. Test cases will be consistent with Interoperability test cases in the OMA document: "Enabler Test Specification for Device Management", Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X
4.81	Device must be *conformance* tested on the LA-RICS network by the Contractor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the Contractor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X
4.82	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X

Note:

1.) As part of LA-RICS acceptance testing (post-PTCRB certification) should test with included antenna(s) supplied with device as applicable.

PSBN DEVICE CATEGORIES

CATEGORY 5 – OUTDOOR UNITS (ODU)

Description	Device Form Factor	Use
Fixed outdoor LTE CPE (ODU). Ethernet cable is used to connect users to the ODU.	Outdoor device typically small profile • e.g. 4.7 x 8.5 x 2.6 inches.	Fixed to an exterior wall of a building providing LTE connectivity for one or more computers inside the building. Optimal placement and high-gain antennae provides superior performance.

Reference No.	Outdoor Units Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	LTE RF Elements	
5.1	Device supports Band Class 14 (BC14_UE).	X
5.2	Device is a Power Class 3 UE.	X
5.3	BC14_UE is a 3GPP Category 3 or 4 device.	
5.4	High-gain Antenna kit is supplied (unless antennae are internal).	
5.5	Provide installation documentation and training for 3rd party installation vendors.	~~X~~
	UE Characteristics	
5.6	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X
5.7	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X
5.8	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	~~X~~
5.9	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	
5.10	Device has Ethernet RJ-45 ports (10/100/1000).	X
5.11	Power to the ODU is provided using over Power over Ethernet (PoE). All necessary accessories are provided to support this functionality.	X
5.12	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X

Reference No.	Outdoor Units Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	eUICC Management	
5.13	If the ODU only uses an eUICC or embedded SIM then the UICC specifications apply for this device.	X
	Certification Note 1, 2	
5.14	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X
5.15	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X
5.16	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority. Identify each carrier supported.	~~X~~
5.17	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X
5.18	Device must be *conformance* tested on the LA-RICS network by the Contractor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the Contractor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X
5.19	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	

Note:

1.) As part of LA-RICS acceptance testing (post-PTCRB certification) should test with included antenna(s) supplied with device as applicable
2.) If a certified mPCI modem is utilized within the device, then the modem certification will carry over to the next higher assembly.

PSBN DEVICE CATEGORIES

CATEGORY 6 – PORTABLE HOTSPOTS

Description	Device Form Factor	Use
Portable Hotspot with single or multiple LTE modems with Wi-Fi and micro-USB connectivity.	• Typical: 4.05 x 2.88 x 0.34 inches. 4.26 ounces or other suitable dimensions based on manufacture design. • Multiple USB port access • AC/DC Power adapter • Battery • UICC slot	Allows the sharing of a device's LTE data connection with other devices on the same network.

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	LTE RF Elements	
6.1	Device must support Band Class 14 (BC14_UE).	X
6.2	Device is a Power Class 3 UE.	X
6.3	BC14_UE is a 3GPP Category 3 or 4 device.	
6.4	BC14_UE has external antennae ports to allow for vehicle rooftop mounting of antennae for all functions – MIMO LTE, Wi-Fi and GPS.	
6.5	Device simultaneously supports B14 and one commercial wireless carrier operations. Identify each carrier supported.	
6.6	Device can simultaneously support B14 and two or more commercial wireless carrier operations (desired). Identify each carrier supported.	
6.7	Device is supplied with Antenna Kit, cables, and other associated parts to complete installation of the device in a vehicle: motorcycle, car, SUV or truck as specified by agency.	
6.8	Provide installation documentation and training for 3rd party installation vendors.	
	UE Characteristics	
6.9	UICC(s) can be installed in the device in the field without voiding its warranty.	~~X~~
6.10	There is a unique UICC for each mobile service provider (LTE band) supported in the device.	
6.11	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X
6.12	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)
6.13	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	~~X~~
6.14	Device meets operational ambient conditions of temperature of -22 to 140 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	
6.15	Device operational ambient temperature of -22 to 170 degrees Fahrenheit or better is desired. Test certification must be on record with the LA-RICS Authority.	
6.16	Device must pass shock resistant to 90 cm drop on any of six sides. MIL SPEC 810. Test certification must be on record with the LA-RICS Authority.	X
6.17	Device must be certified vibration resistant for light truck transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	X
6.18	Device has at least one Ethernet RJ-45 port (10/100/1000).	
6.19	Device has one or more microUSB 2.0 ports.	X
6.20	Device has one or more microUSB 3.0 ports.	
6.21	Device must be certified IEC 60529 or equivalent for intrusion protection (IP) of IP54 or better without the use of a third party enclosure. IEC test certification must be on record with the LA-RICS Authority.	~~X~~
6.22	Device must be certified IEC 60529 or equivalent for IP66 or better without the use of a third-party enclosure. IEC test certification must be on record with the LA-RICS Authority	
6.23	Battery designed to operate unit longer than 10 hours on a single charge.	
6.24	Power accessories: All cords and components necessary to power portable hotspot via standard 110-120v AC receptacle.	X
6.25	Removable battery designed to operate greater than 10 hours on a single charge; plus spare battery and external battery charger.	
6.26	Power accessories: All necessary parts including, but not limited to connectors and harnesses to power the portable hotspot via a nominal 10 - 30 VDC power source (e.g. vehicle battery) are supplied with the unit. As well as replacement batteries	
6.27	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X
Motorcycle Specific UE Requirements		
6.28	Device is certified vibration resistant for motorcycle transportation model using MIL STD-810G, or equivalent. Test certification must be on record with the LA-RICS Authority.	~~X~~
6.29	Device has a small profile suitable for mounting on a motorcycle.	~~X~~
6.30	Device accessories necessary for mounting on a motorcycle including power cabling, antennae, and miscellaneous hardware.	~~X~~

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	Wi-Fi and Bluetooth	
6.31	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n in 2.4 GHz band	X
6.32	Device supports Wi-Fi station (AP) protocol IEEE 802.11b/g/n with operations in dual bands, 2.4 and 5.8 GHz.	
6.33	EIRP of device exceeds 17 dBm with supported MIMO configuration	
6.34	EIRP of device exceeds 24 dBm with supported MIMO configuration	
6.34	The device supports WPA2-Enterprise	
6.35	If the device has WPS capability, it must support disabling that feature.	X
6.36	The device supports at least one SSID	X
6.37	The device supports multiple SSIDs	
6.38	The device is capable of non-broadcast or hidden SSIDs.	
6.39	The device supports Bluetooth 4.0 or higher.	
	GPS	
6.40	The device supports autonomous (standalone) 3-channel, or higher GPS solution.	
6.41	The device supports autonomous (standalone) 3-channel, or higher GPS solution and at least one other satellite system (e.g. GLONASS).	
	UE Security	
6.42	Device is able to support VPN data flows	X
	UI Interface	
6.43	User interface (UI) display is designed for outdoor use with brighter screen or display than found on typical consumer devices.	
6.44	Device touchscreen operates successfully with gloves on.	
	Certification	
6.45	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X
6.46	Device must be FCC Part 15 certified. Test certification must be on record with the LA-RICS Authority.	X
6.47	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X
6.48	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	~~X~~
6.49	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X

Reference No.	Portable Hotspot Requirements	Device Mandatory Minimum Qualifications (X = Yes)
6.50	Device must be ~~**certified to be**~~ interoperable with the Motorola device management system. Test cases will be consistent with Interoperability test cases in the OMA document: "Enabler Test Specification for Device Management", Jan 2008 Normative reference: http://technical.openmobilealliance.org/Technical/Release_Program/docs/ETS/OMA-ETS-DM-V1_2-20110128-C.pdf	X
6.51	Device must be *conformance* tested on the LA-RICS network by the Contractor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the Contractor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X
6.52	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X

PSBN DEVICE CATEGORIES

CATEGORY 7 – mPCIe LTE MODEMS

Description	Device Form Factor	Use	Special Note
LTE modem that provides the LTE radio connectivity for devices.	mPCIe (Full mini F1) 2.0 x 1.18 x 0.2 inches	Embedded in laptops (MDTs), tablets, and routers (esp. mounted in vehicles) to provide LTE connectivity.	The modem requires a UICC.

Reference No.	mPCIe LTE Modem Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	LTE RF Elements	
7.1	Device supports Band Class 14 (BC14_UE).	X
7.2	Device is a Power Class 3 UE.	X
7.3	BC14_UE is a 3GPP Category 3 or 4 device.	X
7.4	BC14_UE has external antenna ports	X
7.5	Device simultaneously supports B14 and one commercial wireless carrier operations. Identify each carrier supported.	X
7.6a	Device simultaneously supports B14 and two or more commercial wireless carrier operations. Identify each carrier supported.	
7.6b	Device can simultaneously support two commercial wireless carriers. Identify each carrier supported.	
	UE Characteristics	
7.7	Device supports interworking with the USIM/USAT applications in the UICC per 3GPP 31.101, 31.102 and 31.111.	X
7.8	Device is fully compliant with all FCC Technical Advisory Board minimum requirements. Ref: http://apps.fcc.gov/ecfs/document/view?id=7021919873	X
7.9	Device meets operational conditions of ambient temperature of 0 to 130 degrees Fahrenheit. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	X
7.10	Device meets operational ambient conditions of temperature of -22 to 170 degrees Fahrenheit or better. MIL SPEC 810G. Test certification must be on record with the LA-RICS Authority.	
7.11	Warranty and any offerings for extended warranties for the device must be on record with the LA-RICS Authority.	X

Reference No.	mPCIe LTE Modem Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	eUICC Management	
7.12	If the mPCIe only uses an eUICC or embedded SIM then the UICC specifications apply for this device.	X
	Certification [Note 1]	
7.13	Device must be FCC Part 90 certified. Test certification must be on record with the LA-RICS Authority.	X
7.14	Device must be FCC Part 15 certified assuming Wi-Fi or Bluetooth functionality. Test certification must be on record with the LA-RICS Authority.	~~X~~
7.15	Device is PTCRB certified for Band 14 operations. Test certification must be on record with the LA-RICS Authority.	X
7.16	Device is certified for operation on the alternate carriers to be used in the operation of the device. Test certification must be on record with the LA-RICS Authority.	X
7.17	Device must be IOT certified with Ericsson RAN. The IOT test plan will be consistent with published CTIA Certification Test Plans. The expectation is that the tests should be executed by a CTIA Authorized Test Lab. **Specific test suites to be provided by LARICS.** Normative Reference: http://www.ctia.org/policy-initiatives/wireless-device-certification/certification-test-plans	X
7.18	Device must be *conformance* tested on the LA-RICS network by the Contractor under the observation and approval of LA-RICS personnel or its agents. The base conformance test plan will follow CTIA's, "Certification Program Test Plan", see link below. The detailed step-by-step IOT plan will be developed by the Contractor, then reviewed and approved by LA-RICS. Normative Reference: http://www.ctia.org/docs/default-source/default-document-library/ctia-test-plan-for-lte-interoperability.pdf?sfvrsn=0	X
7.19	Device must be *acceptance* tested by LA-RICS. Test plan may be based upon all processes from device ordering through drive tests on the LA-RICS network. The purpose of the tests is to operationalize the device and ensure a good quality user experience.	X

Note:

1.) As part of LA-RICS acceptance testing (post-PTCRB certification) should test with included antenna(s) supplied with device as applicable.

PSBN DEVICE CATEGORIES

CATEGORY 8 – UICC

Reference No.	UICC Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	Manufacturing and Ordering	
8.1	The Contractor shall provide Pre-order support for LA-RICS in defining file templates for UICC personalization along with agreed upon inventory card labeling with ICCID and SKU.	X
8.2	The Contractor shall provide a working UICC sample for LA-RICS acceptance.	X
8.3	The Contractor will provide order management system or method from LA-RICS for quantities of standalone UICCs.	X
8.4	Contractor shall support standard low volume orders, such as a minimum quantity of one hundred (100) UICCs per order.	~~X~~
8.5	The Contractor shall provide a process for tracking and reporting LA-RICS orders, including orders based on individual UICC serial numbers.	X
8.6	The Contractor shall provide a detailed step by step ordering and delivery process.	
	Special Requirements	
8.7	The Contractor shall provide UICC components which are compliant with specification: 3GPP TS 31.101 UICC-Terminal interface; Physical and logical characteristics.	X
8.8	The Contractor shall provide UICC components which are compliant with specification: 3GPP TS 31.102 Technical Specifications Group Terminal; Characteristics of the USIM application.	X
8.9	The Contractor shall provide UICC components which are compliant with specification: 3GPP TS 31.103 Characteristics of the IP Multimedia Services Identity Module (ISIM) Application.	X
8.10	The Contractor shall provide UICC components which are compliant with specification: 3GPP TS 31.111: USIM Application Toolkit (USAT).	X
8.11	The Contractor shall provide UICC components which are compliant with specification: 3GPP TS 31.116: Remote APDU Structure for USIM Toolkit Applications.	X
8.12	The Contractor shall provide UICC components which are compliant with specification: ETSI TS 102 221 Smart Cards UICC-Terminal Interface; Physical and Logical Characteristics.	X
8.13	The Contractor shall provide UICC components which are compliant with specification: ETSI TS 102 223 Smart cards; Card Application Toolkit (CAT).	X
8.14	The Contractor shall possess and maintain GSMA SAS (Security Accreditation Scheme) accreditation.	X
	Security	
8.15	The Contractor shall generate, store, and transport secret information in a secure environment and use secured interfaces and file formats.	X
8.16	Proprietary and/or sensitive information, such as security and authentication keys, shall be generated and maintained in a facility which is operated within the United States.	X

Reference No.	UICC Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	Profile	
8.17	The Contractor shall create a UICC profile for the LA-RICS PSBN. The profile shall include application functions and file structures supported on the UICC. A preliminary profile is provided in Table 1 "Preliminary UICC attribute list".	X
8.18	The UICC profile shall include the USIM application.	X
8.19	The UICC profile shall include the ISIM application to support future IMS network access support.	X
8.20	The UICC profile shall support Remote File and Application Management.	X
	Form Factor	
8.21	The Contractor shall provide UICC components compliant with the 2FF (Mini) plug-in form factor.	X
8.22	The Contractor shall provide UICC components compliant with the 3FF (Micro) plug-in form factor.	X
8.23	The Contractor shall provide UICC components which operate across the following temperature ranges: 2FF: -40 °C to +105 °C 3FF: -25 °C to +85 °C	X
8.24	The UICC shall support IMEI locking. IMEI locking is the ability to lock the SIM card to a specific UE.	~~X~~
8.25	Each UICC shall have a unique identifier, such as a serial number. The identifier shall be printed on the card and have a corresponding bar code.	X
8.26	The Contractor shall provide UICC components which are compatible with a variety of commercial mobile operating systems, such as Windows Mobile, Linux, and Android, etc.	X
8.27	The Contractor shall specify a minimum and recommended memory in the UICC card. At a minimum two different configurations shall be provided to cater to data devices and Smartphone classes of devices.	X
8.28	Supply voltage range shall support all 3 classes of voltage range from 1.8v to 5v.	X
	Applications	
8.29	UICC Contractor shall provide specifications for the programming cycles, programming time and data retention time for variety of UICC SIM products offered.	X
8.30	The Contractor shall provide a list of supported applications and aplets for their UICCs.	X
	Provisioning	
8.31	The Contractor shall generate Subscriber provisioning files for LA-RICS.	X
8.32	The Contractor shall support a Subscriber provisioning file format which is compatible with the LA-RICS subscriber provisioning system.	X
8.33	The Contractor's Subscriber provisioning files shall be transmitted to LARICS using secured interfaces and encrypted formats.	X
8.34	The Contractor shall provide a secure process for entry of UICC output file with keys, etc. (i.e. K_i) into LA-RICS HSS. See Figure 1.	X
8.35	The Contractor shall provide certification of compatibility and operability with LA-RICS User Devices and the LA-RICS network.	~~X~~

Reference No.	UICC Requirements	Device Mandatory Minimum Qualifications (X = Yes)
	Certification	
8.36	The Contractor will provide GSMS SAS-certified manufacturing and personalization of ordered UICCs, based upon LA-RICS personalization template and customer order entry information.	X
	End State	
8.37	The end state is a provisioned LTE network and functional UE. Refer to Figure 1 for the conceptual process and Table 2 for SOW timeline.	

FIGURE 1:

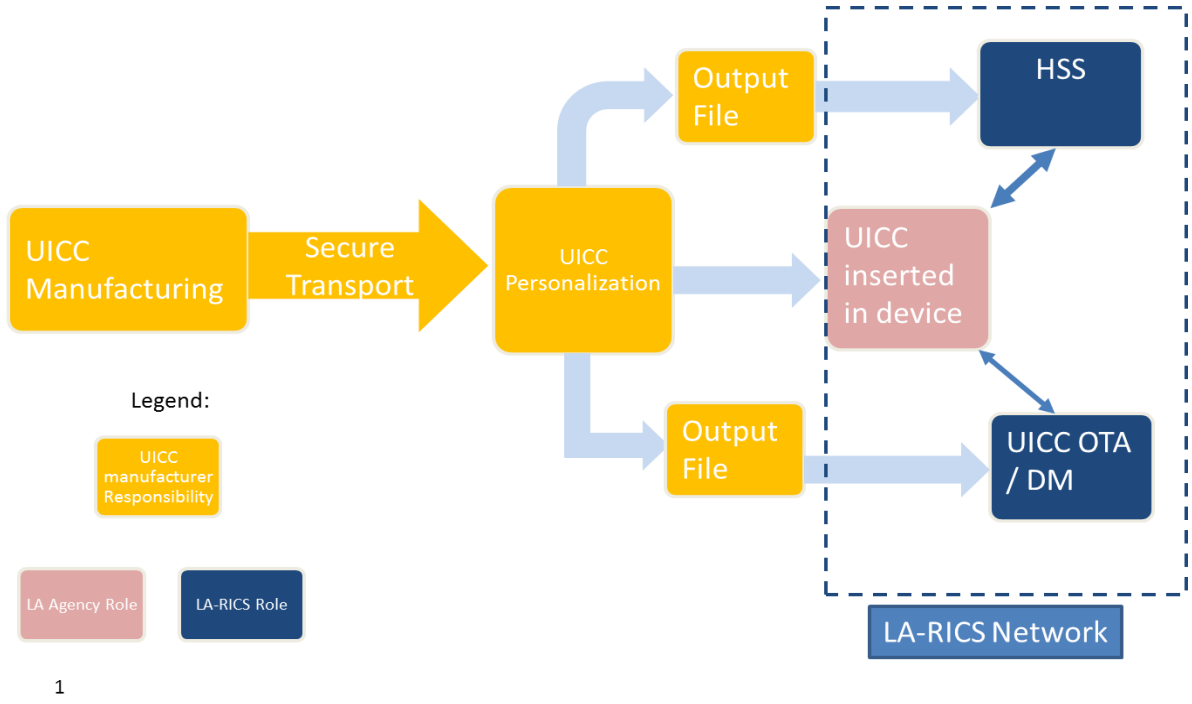

TABLE 1:

Field	Value	Notes
MCC	313	
MNC	100	
MSIN	*{454850000 – 454899999}*	Sub-range to be provided at time of order
Operator name	"LA-RICS"	Arbitrary string no longer than 10 characters.
Operator key (OP_key)	TBD	Loaded into HSS and UICC. Exact value under
K_i Key	*Private, created during UICC process*	Shared private key created during UICC manufacturing process. Resides in both HSS and UICC. Secure process required by vendor
Special Access Control Class	• All First Responder UICCs will be programmed with AC = 14 and 13 and 12 and [0-9].	Emergency services Access Class.
	• [0-9] is randomly assigned, as is customary today with consumer UICCs.	
	• Local PS policy will determine if the AC is different for secondary responders.	
PIN / PUK	4-digits / 8-digits	Personal Identification Number (PIN) and PIN Unlocking Key (PUK) Value
Device Manager APN	mgmt.losangco.ca.apn.epc. mnc100.mcc313.3gppnetwork.org	
Local APN	publicsafety.losang.ca.apn.epc. mnc100.mcc313.3gppnetwork.org	
Diameter Realm	losangco.ca.epc.	
Form Factors	{2FF, 3FF}	Derived from device specified.

TABLE 2 – SOW:

No.	Deliverable	Date
1	Vendor UICC Specification Document	2 weeks from start date
2	• Pre-order support with LA-RICS:	4 weeks from start date
	• UICC personalization template	
	• Inventory plan: UICC marking plan with ICCID and SKU	
	• Working UICC sample for LA-RICS acceptance tests	
3	UICC working samples	6 weeks from start date
4	Order management and delivery process with LA-RICS for quantities of standalone UICCs.	6 weeks from start date
5	Secure process for entry of UICC output file with keys, etc. (i.e. Ki) into LA-RICS HSS.	8 weeks from start date
6	Secure process for entry of UICC output file into UICC OTA device management system.	8 weeks from start date
7	Certification Test Plan and Execution	8 weeks from start date
8	Commence Production	12 weeks from start date