QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS

General Information

1. Federal Agency and Organizational Element to Which Report is Submitted	2. Award Identification Number	3. DUNS Number
Department of Commerce, National Telecommunications and Information Administration	NT10BIX5570158	962696089

4. Recipient Organization

Los Angeles Regional Interoperable Communications System Authority 2525 Corporate PL Ste 200, Monterey Park, CA 91754-7672

5. Current Reporting Period End Date (MM/DD/YYYY)	6. Is this the last Report of the Award Period?
03-31-2016	◯ Yes ⦿ No

7. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.

7a. Typed or Printed Name and Title of Certifying Official	7c. Telephone (area code, number and extension)
Lam Tran	323 881831
Grant Analyst	**7d. Email Address** Lam.tran@la-rics.org

7b. Signature of Certifying Official	7e. Date Report Submitted (MM/DD/YYYY):
Submitted Electronically	06-01-2016

Project Indicators (This Quarter)

1. Please describe significant project accomplishments completed during this quarter (600 words or less).

Motorola Solutions, Inc. (MSI) is finishing up the remaining sites commissioning on the 63 static sites (individual site testing) and Transport & Microwave Radio (TMR) commissioning allowing the cluster tuning to begin and is expected to be completed in late February. All pending back-haul connections to all sites are being monitored on a daily basis and are projected to be completed by the end of January. As the Cluster tuning moves through its different phases each site will be optimized according to the recommendations from the engineers. The Key Performance Indicators (KPI) which are the results of the first round of testing will be gathered and analyzed by engineers from MSI and the Authority to assure the Network performance is at the level previously determined per the contract. Further testing is to follow to further explore any gaps or inconsistency in the coverage areas.

Currently we have designated three locations 1) Fire Command and Control Facility (FCCF), 2) Sheriffs Communication Center (SCC) & 3) Los Angeles Regional Interoperable Communications System (LA-RICS) office throughout the County of Los Angeles to house the Network Operations Command Center (NOCC) equipment for monitoring of the Public Safety Broadband Network (PSBN). Two (FCCF & LARICS office) of the three locations have been completed. The SCC location is undergoing an upgrade for both power and the reconfiguration of the room where all the technical and operation personnel will resides. This work is to be completed by end of the 3rd quarter of 2016.

Between January 1, 2016 and March 31, 2016, Los Angeles County Sheriff Department (LASD) began implementation of their Public Safety Broadband Network (PSBN) router installation project. An antenna and router layout design map was created taking into account antenna interference issues and space requirements for four different types of vehicles. In addition, LASD and LA-RICS worked on an antenna exchange agreement with both Sierra Wireless and Motorola as the original antenna purchased did not meet their requirements. LASD technicians continued to work toward solutions with provisioning the routers so they could be used on the PSBN. Some of the issues encountered included Netmotion compatibility issues, communication manager software needed for Sierra Wireless routers, and Global Positioning System (GPS) mapping concerns with both Motorola and Sierra Wireless routers.

Key Learning Conditions (KLC)

Currently writing KLC methods and timing for inclusion into LTE Phase 2. The methods will cover how we will manage providing the requested information as follows:
Secondary Responders: Establish partnership agreements with utilities and secondary responder agencies that defines asset usage, valuation, and service level agreements (SLAs) between the parties.
Quality of Service (QoS) Network alert mechanisms: Ensure network alert mechanisms are in place to alert operators of network congestion events impacting user perceived degradation of QoS
Testing/Validation of National Public Safety Telecommunications Council (NPSTC) Priority and QoS Requirements and management alternatives

LA-RICS Board Activity

On March 3, 2016, the LA-RICS's Joins Power Authority (JPA) Board approved John Radeleff as the Interim Executive Director of the LA-RICS project. The position serves as the highest level of technical and administrative review of the LA-RICS project and is responsible for the overall management of the program.

Outreach Activity

Stakeholder meetings were scheduled with the Rowland Heights Community Coordinating Council and the City of Glendale. The purpose of the stakeholder outreach meetings is to provide an update on LA-RICS, site access agreements, and the funding plan. The goal of the outreach team is to meet with the city manager, fire and police personnel, and/or representatives from planning departments or information offices of the jurisdictions.

Tasks in support of continued development and distribution of ongoing communications involved website support, continued planning and scheduling of stakeholder meetings, and distribution of the March edition of the bi-monthly ongoing communications newsletter; the LA-RICS Dispatch. Ongoing activities include weekly outreach status meetings, site access agreement meetings, design meetings, and other related activities in support of executing stakeholder outreach.

The outreach team wrote, edited and distributed the March edition of the LA-RICS Dispatch. The Dispatch contained 4 stories, which included:
• LA-RICS JPA Appoints Interim Executive Director
• LA-RICS Announces Two New Board Members
• New Emergency Communications System Aces its First Test: the 2016 Rose Parade
• LA-RICS Completes a Series of Public Review Meetings
Lastly, the outreach team also inventoried the LA-RICS homepage for outdated information and graphics.

2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2a.	Overall Project	79	Awaiting final close out binders and ATP of all PSBN sites.
2b.	Environmental Assessment	100	No construction activities occurred that required monitoring.
2c.	Network Design	100	Network design is complete. No change in the site configuration. All sites have both power and backhaul delivered (including all microwave paths) and have visibility to the core.
2d.	Rights of Way	100	Complete.
2e.	Construction Permits and Other Approvals	100	Complete.
2f.	Site Preparation	100	Complete.
2g.	Equipment Procurement	100	Complete.
2h.	Network Build (all components - owned, leased, IRU, etc)	100	The final configuration for the NOCC at SCC building is scheduled for completion by end of Q2 2016. The other two NOCC locations FCCF and LARICS office are complete.
2i.	Equipment Deployment	100	All static and mobile site units (COW's) are currently in place or deployed. One COW that was not deployed will be moved to a location to be chosen at a later date.
2j.	Network Testing	95	Cluster tuning has been completed. Wide Area Testing is under review.
2k.	Other (please specify):	0	N/A

3. To the extent not covered above, please describe any challenges or issues faced during this past quarter in achieving planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).

In-Vehicle Routers Installation
The installation of 2,265 Public Safety Broadband Network (PSBN) in-vehicle routers in Los Angeles County Sheriff's Department (LASD) patrol vehicles was scheduled to begin in February 2016, however, the start of the installation process was delayed due to the following logistical issues:
• Creation of antenna configuration diagrams for multiple vehicle models (Ford Utility, Ford Crown Victoria, and Chevrolet Tahoe).
• Antenna exchange negotiation and agreement with vendor.
• Los Angeles County Procurement process for the purchase of two additional antennas to be used with each in-vehicle router.
• Network mapping diagram and integration issues.

The (10) Southern California Edison (SCE) Cell-On-Wheel (COW) are currently on the radar to complete the installation process (i.e. utilities including final optimization and integration). The partial hold up for the scheduled work to start is in part because of the negotiations between Los Angeles Regional Interoperable Communications System (LARICS) and SCE including final permits, engineering and design for electrical services.

The Authority and MSI is continually working with the 3 carriers (AT&T, Verizon and Time Warner Cable (TWC)) to procure the final delivery of fiber circuits for six (6) sites LASD Industry (IDT), LASD Lakewood (LKD), Vernon Fire Department (VEFD003), Fire Station 5 (FS5), Walnut/Diamond Bar (WAL), and West Hollywood (WHD). At this time these sites are running on HSD (High Speed Data) allowing the final testing and optimization to proceed on schedule. The NOCC (Network Operations Command Center) located at SCC (Sherriff Command Center) is underway with the expected room completion sometime in the 3rd quarter of 2016. The server, backhaul, power upgrades and other security components are in the design phase all of which are moving forward to meet the required delivery dates.

In the same period, Motorola replaced 250 high gain antennas with a low profile solution for Los Angeles County Fire Department (LACFD). The process of finding the vendor to install the antennas was difficult as a result of the wide price ranges that were quoted, from the low $400 to the high $1,400, for the same engine. A Master Agreement Contract could not be created, therefore LACFD is moving forward with a Request for Bid (RFB) for an installation team to supplement the current installation with Internal Service Department (ISD) who is currently installing (2) VML750 (Vehicular Modem LTE) a day for LACFD.

4. Please report the following information regarding network build progress. Write "0" in the Total column and "N/A" in the Narrative column if your project does not include this activity. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (600 words or less).

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
New network miles deployed	156	It includes all 15 point to point microwave links, including intermediate hops going to the non-LTE sites.
New network miles leased	0	No new network miles leased.
Existing network miles upgraded	100	Calculates distance between nodes used on Los Angeles County and City of LA fiber.
Existing network miles leased	494	Existing network miles leased from Time Warner Cable and AT&T to LACO Fire Command Control Facility.
Number of miles of new fiber (aerial or underground)	0	Essentially less than a mile for site communication.
Number of new wireless links	12	New PSBN microwave links.
Number of new towers	30	There are currently 30 Towers installed.
Number of new and/or upgraded interconnection points	0	N/A

For questions 5 and 6 please include information relating to agreements that you are negotiating or have entered into, or that your sub recipient, contractor or subcontractor is negotiating or entered into.

5a. If applicable, please provide the following information with regard to agreements with broadband wholesalers and/or last mile providers as a result of your project.

Indicators	
Number of signed agreements with broadband wholesalers or last mile providers	0
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	0
Average term of signed agreements (in quarters)	0

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers:
N/A

5c. What wholesale services are being provided by this project? Please describe below. As an attachment to this report, please provide pricing plans (in $ per month) associated with each wholesale service provided by your product (100 words or less). Wholesale services description:
N/A

5d. If you have designated a third party to operate all or a portion of your network, please provide the name and contact information for this third party, indicate if this entity is a sub recipient, contractor, and/or subcontractor, and describe with specificity the portion of your network this this third party operates (600 words or less).
N/A

6. Please provide the data according to the type of subscriber. Write "0" in the Total column and "N/A" in the Narrative column if your project does not pass or serve a particular subscriber type. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (300 words or less).

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Broadband Wholesalers or Last Mile Providers	**Providers with signed agreements receiving new access**	0	N/A
	Providers with signed agreements receiving improved access	0	N/A
	Providers with signed agreements receiving access to dark fiber	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A
Community Anchor Institutions (including Government institutions)	**Total subscribers served**	0	It is estimated that 606 CAIs will be added to the completed Network.
	Subscribers receiving new access	0	Pending system acceptance.
	Subscribers receiving improved access	0	Pending system acceptance.
	Please identify the speed tiers that are available and the number or subscribers for each	0	Pending system acceptance.
Residential / Households	**Entities passed**	0	N/A
	Total subscribers served	0	N/A
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A
Businesses	**Entities passed**	0	N/A
	Total subscribers served	0	N/A
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A

7. Please describe any special offerings you may provide (600 words or less).
N/A

8a. Have your network management practices changed over the last quarter? ◯ **Yes**   ⦿ **No**

8b. If so, please describe the changes (300 words or less).
N/A

9. Community Anchor Institutions:
Using the table below, please provide a list by service area of the community anchor institutions (including Government institutions) connected to your network as a result of BTOP funds. Figures should be reported for the most recent reporting quarter only (NOT

cumulatively). Also indicate whether your organization is currently providing broadband service to the anchor institution. Finally, provide a short narrative description with examples of how institutions are using BTOP-funded infrastructure **(300 words or less).**

Institution Name	Service Area (town or county)	Type of Anchor Institution (as defined in your baseline)	Are you also the broadband service provider for this institution? (Yes / No)	Narrative description of how anchor institutions are using BTOP-funded infrastructure
N/A	**N/A**	**N/A**	**N/A**	**N/A**

Project Indicators (Next Quarter)

1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).

LTE-2
• The team is currently working through the process of candidate selection and is in part a derivative of the Radio Frequency (RF) design completed by Televate. Below is the current status of all activities: 56 search rings reduced to 52 due to site candidate coverage predictions also cover adjacent search rings
• 50% of search rings have identified at least a primary and/or a secondary candidate that meet RF coverage requirements
• Reviewing MSI Cluster Tuning data to refine search ring Maps
• 25% of search rings are being revisited to find candidates from Los Angeles Department of Water & Power (LADWP)
• 25% are only suited as small cell deployments based on terrain issues

We expect to have candidate section completed including SCIP's (Site Candidate Information Packages) The constructability and Site Access Agreement (SAA) process for each site will follow in preparation for the environmental review, polygons and site viability to develop a new PSBN site. The majority of this work will be on going and completed throughout the year.

In-Vehicle Routers Installation Update
On May 2, 2016, Los Angeles Sheriff Department (LASD) began installation of in-vehicle routers in Ford Crown Victorias at a rate of approximately 40 vehicles per month. The vehicle installation rate is scheduled to increase to 60-80 vehicles per month beginning in June 2016 and 80-105 vehicles per month in July 2016.

Operations classes will be ongoing through the end of the year of 2016 and should be the final piece to provide LA-RICS the essential tools required to operate and maintain the PSBN Network.

KPI Projections.
It is estimated that 606 Community Anchor Institutions (CAI) (schools, hospitals, public safety entities) could be directly connected to the completed network. The CAI estimated number will be updated with actual once the network is fully operational.
It is expected 156 New Miles to be deployed, Zero New Miles to be leased, 100-110 Existing Miles to be upgraded, 77 Wireless Transmission Sites, 527 Existing Network Miles to be leased and Zero Improved CAIs.

Outreach
Planned outreach to potential users including ongoing contact and discussions with Metropolitan Transportation Authority (MTA) Administrators and Sheriff representatives resulted in LA-RICS providing MTA with test equipment that is currently being used on certain bus routes.
Meetings with the member agencies who opted out are ongoing. A meeting with the City of Bell and Interim Executive Director John Radeleff resulted in Bell City Council approving reinstatement to LA-RICS. Outreach to the Department of Veterans Affairs Greater Los Angeles Regional Administrators resulted in a meeting and a forthcoming Memorandum of Understanding (MOU) for test equipment.

2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Planned Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the next reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2a.	**Overall Project**	81	Training for subscribers and stakeholders will continue but with a modified approach after finding the need to hold a single class several times because trainees could not be removed from their field assignments at the same time due to resource constraints. A rotating training schedule will be offered to address this.

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2b.	Environmental Assessment	100	No variance from baseline.
2c.	Network Design	100	Complete.
2d.	Rights of Way	100	Complete.
2e.	Construction Permits and Other Approvals	100	Complete.
2f.	Site Preparation	100	Complete.
2g.	Equipment Procurement	100	Complete.
2h.	Network Build (all components - owned, leased, IRU, etc.)	100	Complete.
2i.	Equipment Deployment	100	Complete.
2j.	Network Testing	99	Test and turn up are on scheduled to be completed by April, 2016.
2k.	Other (please specify):	0	N/A

3. Please describe any challenges or issues anticipated during the next quarter that may impact planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).

Expected challenges expected be low due to all phases of the executed contract with MSI for build out of PSBN Part 1 will be completed by July. The gathering of final close out documents or miscellaneous items will be the main focus as well as all classes for the member agencies and users training. Operations classes will be ongoing through the end of the year of 2016 and should be the final piece to provide LA-RICS the essential tools required to operate and maintain the PSBN Network.

Infrastructure Budget Execution Details

Activity Based Expenditures (Infrastructure)

1. Please provide details below on your total budget, cumulative actual expenditures (for the period ending the current quarter), and cumulative anticipated expenditures (for the period ending next quarter) for each line item, including detailed disbursements of both matching funds and federal funds from project inception through end of this quarter (actual) or next quarter (anticipated). Actual and anticipated figures should be reported cumulatively from award inception to the end of the applicable reporting quarter.

Cost Classification	Budget for Entire Project			Actuals from Project Inception through End of Current Reporting Period			Anticipated Actuals from Project Inception through End of Next Reporting Period		
	Total Cost (plan)	Matching Funds (plan)	Federal Funds (plan)	Total Cost	Matching Funds	Federal Funds	Total Costs	Matching Funds	Federal Funds
a. Administrative and legal expenses	$21,638,208	$9,051,435	$12,586,773	$23,166,108	$9,980,830	$13,185,279	$23,392,526	$9,997,200	$13,395,326
b. Land, structures, right-of-ways, appraisals, etc.	$13,924,063	$6,503,266	$7,420,797	$6,955,852	$6,955,852		$6,955,852	$6,955,852	
c. Relocation expenses and payments									
d. Architectural and engineering fees	$31,932,812	$1,405,994	$30,526,818	$29,454,566	$1,569,511	$27,885,055	$31,241,274	$1,569,511	$29,671,763
e. Other architectural and engineering fees									
f. Project inspection fees									
g. Site work									
h. Demolition and removal									
i. Construction	$22,375,009		$22,375,009	$15,018,506		$15,018,506	$16,036,128		$16,036,128
j. Equipment	$41,713,113	$1,927,892	$39,785,221	$30,801,816	$1,619,560	$29,182,256	$31,145,216	$1,740,410	$29,404,806
k. Miscellaneous	$6,318,019	$1,870,500	$4,447,519	$3,227,492		$3,227,492	$3,258,077		$3,258,077
l. SUBTOTAL (add a through k)	$137,901,224	$20,759,087	$117,142,137	$108,624,340	$20,125,753	$88,498,588	$112,029,073	$20,262,973	$91,766,100
m. Contingencies									
n. TOTALS (sum of l and m)	$137,901,224	$20,759,087	$117,142,137	$108,624,340	$20,125,753	$88,498,588	$112,029,073	$20,262,973	$91,766,100

2. Program Income: Please provide the program income you listed in your application budget and actuals to date through the end of the reporting period.

a. Application Budget Program Income: $0	b. Program Income to Date: $0