

QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS		
General Information		
1. Federal Agency and Organizational Element to Which Report is Submitted Department of Commerce, National Telecommunications and Information Administration	2. Award Identification Number NT10BIX5570158	3. DUNS Number 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) 12-31-2015	6. Is this the last Report of the Award Period? <input type="radio"/> Yes <input checked="" type="radio"/> 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 Gina Samy Fiscal Officer	7c. Telephone (area code, number and extension) 1323881825 7d. Email Address Gina.Samy@la-rics.org	
7b. Signature of Certifying Official Submitted Electronically	7e. Date Report Submitted (MM/DD/YYYY): 02-25-2016	

Project Indicators (This Quarter)**1. Please describe significant project accomplishments completed during this quarter (600 words or less).**

Construction of all 63 fixed Public Safety Broadband Network (PSBN) sites were completed during this period. The Authority and project manager Jacobs Engineering held weekly status meetings with the utilities to receive updates on a regular basis in hopes of minimizing the delivery timelines and to assure nothing is missed. These meetings have brought great results and the completion of permanent power as well as backhaul to 99% of all PSBN sites, leaving only a handful of sites requiring their final backhaul solution.

Out of the fifteen (15) Cells on Wheels (COWs), four (4) are construction complete including utilities and one (1) will be used as a true mobile COW. The remaining ten (10) COWs which are placed on Southern California Edison (SCE) properties are construction complete awaiting the final connection for power and backhaul to be provided by SCE. This final connection is tentatively scheduled for completion for early April 2016.

The PSBN project is now moving into the final phase of Cluster Turning and optimization. The PSBN Network is divided up into eight (8) clusters located within the Los Angeles region. The first clusters testing started in late December and will continue into January 2016. The data collection for all clusters will take about 1-2 weeks and once the Radio Frequency (RF) engineers have entered the information into their RF tool, they will begin the process of analyzing the data to prepare for any optimization if required.

In October, 2015, Los Angeles County Fire Department conducted a beta test of the LTE system during the West Halloween Carnival wherein a Homeland Security vehicle was deployed to stream live video via band 14 PSBN to the West Hollywood Sheriff and Los Angeles Police Department (LAPD) Hollywood Stations, then via backhaul to the core at Los Angeles County Fire and Command Control Facility (FCCF). Incident commanders were able to benefit from situational awareness through the live PSBN feed and noticed no impact or degradation to the video feed. In comparison, commercial throughput was measured at 60 MHz per second at 5 p.m., which went down to .5 MHz per second (if able to connect at all) as the crowd grew larger by 9 pm.

In December, 2015, prior to the launch of the LTE Network, LA-RICS has scheduled for a Special Operations Test (SOT) to be performed and chose the 2016 Rose Bowl Parade held in Pasadena California on New Year's Day as the venue. This proof of concept will provide the necessary data for testing devices, programs and simple functions that National Telecommunications and Information Administration (NTIA) , First Net and the local agencies have been looking for. Los Angeles County Sheriff's Department (LASD) and Los Angeles County Fire Department (LAFD) staff, along with technology partners, will provide secure video surveillance footage and voice and data communications in support of security. They will utilize two LA-RICS systems, the Land Mobile Radio (LMR) system and the PSBN. Preparations and testing started on December 31, 2015.

Device roll out plan. The Authority and MSI worked to deploy user equipment in anticipation of the Rose Parade. The Authority programmed up to 58 user devices (handhelds, routers, and modems) to operate for the parade. However, the installation schedule of modems in Sheriff and Fire vehicles has been extended due to the need to keep the public safety fleet active and usable. This has slowed the process but we are continuing to work on accelerating the installation.

Joint Powers Authority (JPA) Board. During this period, the LA-RICS JPA Board voted to not extend the November 24, 2015 deadline for members to opt in or out of membership. As of December 31, 2015, there are 23 members and 46 non member agencies. Although membership was reduced, members who elected to remain will see no increase to their obligation as the County of Los Angeles has offered for now to cover any shortages beyond the October 8, 2015 Funding Plan update. Coverage-wise, the service area remains relatively unchanged.

On administrative matters, the Board recognized that the major milestone reached by the LTE system from a system in development to an operation resource for first responders necessitates a transfer of leadership from a public administrator to a law enforcement leader. Since the Los Angeles County Sheriff's and Fire Department share the responsibility of providing law enforcement and fire fighting services to over 40 contract and independent cities, the Board unanimously approved the appointment of Sheriff Jim McDonnell as Chair and Fire Chief Daryl Osby as Vice Chair.

On resolving outstanding claims or additional compensation arising out of construction change orders, the Authority and Motorola Solutions agreed to terms on a settlement of all existing issues by LA-RICS Board Action on December 21, 2015.

The United States Congress passed a Continuing Resolution legislation that effectively extended the availability of BTOP funds to 2020. The Authority is awaiting input from NTIA regarding how any future activity may proceed. Project plans and associated details are being prepared to support an extension of the performance period.

Outreach. For the period of Oct to Dec, 2015, the outreach team met with the California Highway Patrol (CHP) Station Commander of the Woodland Hills site and members of his staff to discuss and schedule outreach to the 130 members of the CHP West Valley Area station. Outreach to the CHP West Valley Area Station staff was conducted in three (3) separate sessions during the month of November. Door-to-door outreach to the residences and businesses within a 500' radius of the aforementioned sites was also conducted in the month of November. The outreach team was accompanied by the Public Information Officer of the CHP West Valley Area Station during this door to door outreach. No outreach activities were conducted in December.

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	76	The project is almost complete, awaiting completion of backhaul for three (3) sites.
2b.	Environmental Assessment	99	Concluded the Section 7 and Section 106 consultation processes and the National Environmental Policy Act (NEPA) process for the project in the quarter. Extension of grant period extended construction timeline. Construction monitoring is ongoing, only minor compliance issues have been identified to date, and these have been aggressively corrected.
2c.	Network Design	100	The network design is complete. It consists of 78 sites, consisting of 63 fixed Long Term Evolution (LTE) sites, 1 microwave site, and 14 COWs deployed, 1 COW housed. Operational status: 63 fixed sites are power verified (electrical complete to allow equipment turnup); 59 backhaul circuits have been delivered (last four sites are BMT, LAPD001, AZPD001, VPC); 23 microwave site installations have been completed; 11 microwave path alignments have been completed; 10 microwave ATPs completed; 57 sites connected to Core (eNodeB viewable at Evolved Packet Core); 51 shakedown 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. The Authority and Motorola Solutions agreed to terms on a settlement of all existing issues by LA-RICS Board Action on December 21, 2015.
2h.	Network Build (all components - owned, leased, IRU, etc)	100	Complete. Installation of equipment at the LASD Sheriff Communications Center (SCC) is ongoing. Configuring connectivity between FCCF and SCC.
2i.	Equipment Deployment	100	Complete. COWS update: All 15 were deployed to sites: two has connectivity back to the Core, one is waiting for microwave installation, one is finishing construction of power run, one is housed to be a true mobile COW. Ten COWs are waiting for approval with SCE.
2j.	Network Testing	85	Initial cluster tuning will start Feb, 2016 and continue to end of Mar, 2016. Network testing to begin after cluster tuning is completed.
2k.	Other (please specify):	0	The United States Congress passed a Continuing Resolution legislation that effectively extended the availability of BTOP funds to 2020. The Authority is awaiting input from NTIA regarding how any future activity may proceed. Project plans and associated details are being prepared to support an extension of the performance period.

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).

Backhaul and Power Issues. The Authority worked through numerous backhaul and power issues on sites. Each site presented their own unique circumstances (Verizon and SCE, Time Warner Cable, and Los Angeles Department of Water and Power, etc.) and it took significant effort and focused attention to resolve the problems.

Issues with Southern California Edison. The Authority was in significant and protracted discussions with both NTIA and SCE regarding the BTOP grant requirements and the level of pass-through to SCE. By the end of the quarter these issues were still unresolved.

Device roll out plan. The Authority worked with MSI and the Authority's suppliers to order equipment and conduct the installation. The installation schedule has been extended due to the need to keep the public safety fleet active and usable. This has slowed the process

of installing modems in Sheriff and Fire vehicles. We are continuing to work on accelerating the installation.

Cluster tuning. The Authority expected all sites to be up and connected to the Core by the middle of December and with cluster tuning to begin in mid to late November. The Authority encountered issues with power being delivered to the sites and receiving final permits to activate the sites. Cluster tuning was delayed because these issues were not concentrated in a single cluster but were sprinkled throughout the clusters, usually with a single site delaying progress.

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.
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	25 Newly-constructed Monopoles, 1 Monopine, 2 Monopalms, and 2 Monopole/Flag Poles.
Number of new and/or upgraded interconnection points	0	Only interconnection to third parties.

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)
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	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A
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? <input type="radio"/> Yes <input checked="" type="radio"/> 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).**

Phase 1 of the project is expected to be completed by the next quarter. By January 31, 2016, all 63 fixed sites will be made active to the Core. After the eNodeB has been fully commissioned, engineers will complete a technical review of all site equipment (radios, backhauls, alarms, antennas and lines, etc) assuring the performance level for that individual site is ready. The next phase of testing is cluster tuning and it will be completed on all eight (8) clusters.

All non-SCE COWS will also be active to the Core. It is expected that an agreement will be reached between the Authority and SCE for completion of the deployment of the remaining ten (10) COWS and construction activity on these locations would be in progress. The Authority also intends to start provisioning its own devices and installing them in the Member Agency vehicles.

The United States Congress passed a Continuing Resolution legislation that effectively extended the availability of BTOP funds to 2020. The Authority is awaiting input from NTIA regarding how any future activity may proceed. Project plans and associated details are being prepared to support an extension of the performance period.

JPA Board. LA-RICS anticipates clarification from NTIA on a path forward on work referred to as "LTE Phase II". Such guidance will help shape the proposed project plan, associated activities, costs, time frame for the extended performance period of the BTOP grant. On administrative matters, a recommendation will be made to set a date for the election of three At-Large Director and four Alternate Director seats.

KPI Projections. It is estimated that 606 Community Anchor Institutions (schools, hospitals, public safety entities) could be directly connected to the completed network. It is expected 113.7 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.

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	83	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.
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	95	Test and turn up are on scheduled to be completed by April, 2016.

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2k.	Other (please specify):	0	The Authority is currently working on developing an Implementation Plan for Phase 2 of the PSBN project; estimated completion is by mid Feb, 2016.

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).

Despite diligent efforts to address them, challenges may linger regarding negotiations with SCE on BTOP grant requirements, device roll out and scheduling/installation on public safety vehicle fleets, and cluster tuning.

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.

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		
Cost Classification	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	\$22,486,854	\$9,931,717	\$12,555,137	\$23,154,912	\$10,438,346	\$12,716,566
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	\$28,582,569	\$1,569,511	\$27,013,058	\$29,965,958	\$1,683,993	\$28,281,965
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	\$13,408,803		\$13,408,803	\$18,965,346		\$18,965,346
j. Equipment	\$41,713,113	\$1,927,892	\$39,785,221	\$29,771,615	\$1,257,008	\$28,514,607	\$32,733,220	\$1,257,008	\$31,476,212
k. Miscellaneous	\$6,318,019	\$1,870,500	\$4,447,519	\$3,135,738		\$3,135,738	\$3,135,738		\$3,135,738
I. SUBTOTAL (add a through k)	\$137,901,224	\$20,759,087	\$117,142,137	\$104,341,431	\$19,714,088	\$84,627,343	\$114,911,026	\$20,335,199	\$94,575,827
m. Contingencies									
n. TOTALS (sum of l and m)	\$137,901,224	\$20,759,087	\$117,142,137	\$104,341,431	\$19,714,088	\$84,627,343	\$114,911,026	\$20,335,199	\$94,575,827

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
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