FINAL ENVIRONMENTAL ASSESSMENT

CONSTRUCTION AND OPERATION OF A LONG TERM EVOLUTION (LTE) WIRELESS BROADBAND NETWORK

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EXECUTIVE SUMMARY

Adams County Communications Center, Inc. (ADCOM911) was awarded a grant from the Broadband Technology Opportunities Program (BTOP) to install and operate a 700 megahertz (MHz) Long Term Evolution (LTE) broadband network for the Adams County and Denver International Airport (DIA) service areas. The proposed 700 MHz LTE broadband network would be designed with an open architecture that allows both for future expansion and easy integration with similar networks as they are constructed. The design would provide enable high-speed, high availability, high reliability mobile wireless data to public safety users.

As one of the 21 recipients of a waiver by the Federal Communications Commission (FCC) to develop a LTE wireless broadband network for public safety using the 700 MHz spectrum, ADCOM911 and DIA propose to develop the wireless network needed by public safety agencies, setting the stage for regional development and eventually integration into a national public safety broadband network.

In addition to providing public safety end users wireless broadband access, the proposed project would establish the foundation for the development of a public safety fiber network linking multiple public safety answering points (PSAPs) and other community anchor institutions throughout the greater Denver area. This fiber network would allow PSAPs to begin realizing the benefits of next generation 911.

ADCOM911 is a multijurisdictional public safety communications center that provides voice and data services to 5 law enforcement agencies and 10 fire/emergency medical system (EMS) agencies. ADCOM911 serves agencies at the municipal and county levels, as well as special districts in both urban and rural areas with a total population of approximately 430,000. DIA is by land size (at 53 square miles or 140 square kilometers), the largest international airport in the United States, and the third largest international airport in the world. In 2009, DIA was the tenth busiest airport in the world by passenger traffic with more than 50 million passengers (ACI 2010).

Purpose and Need

The purpose of the Proposed Action is to construct and operate a 700 MHz LTE wireless broadband network that provides sufficient, requisite, high-speed, electronic data and voice communication services, notably for use by approximately 2,000 first responders from agencies operating within the Adams County and DIA service areas. The need for the Proposed Action is to provide an interoperable, secure, high-speed wireless data network that will allow all first responders to receive critical information, as well as to improve communications connectivity to critical community anchor institutions including PSAPs, municipal governments, and school districts in Adams and Jefferson counties, and Brighton, Commerce City, Northglenn, and Thornton, as well as rural portions of Adams County.

Proposed Action

In the Proposed Action, ADCOM911 would construct and operate a new wireless broadband network within the 1,200-square-mile operating area that includes Adams County and DIA. The interoperable wireless broadband network would be used by

approximately 2,000 first responders from agencies working in the operating area. The LTE network would interconnect public safety answering points, municipal governments, and school districts in Adams and Jefferson counties, and Brighton, Commerce City, Northglenn, and Thornton, as well as rural portions of Adams County, making the LTE network area a unique mix of urban, suburban, and rural populations. This Environmental Assessment (EA) considers two alternatives.

- **Preferred Alternative**. The Preferred Alternative would include the construction of underground fiber optic cable (i.e., West Corridor and Cherokee Tower Corridor) and the enhancement of existing base stations.
    - For the West Corridor, about 12 miles of fiber optic cable would be routed along a 12.1-mile light rail transit corridor between the Auraria Campus in downtown Denver and the Jefferson County Government Center in Golden, Colorado. The fiber optic cable would be placed in conduit within the Regional Transportation District (RTD) right-of-way. The conduit has already been approved by the Federal Transit Administration (FTA) through a 2003 environmental impact statement (EIS) process and associated 2004 Record of Decision (ROD) (FTA 2004).
    - For the Cherokee (West) Tower Corridor, about 10 miles of fiber optic cable would be routed along existing rights-of-way beginning at an existing pull box located next to ADCOM911's primary facility in Commerce City. The route would extend due west to an existing railroad line and follow the railroad line northward for about 5.75 miles. The route will then turn east along municipal road rights-of-way, crossing Interstate 25 through existing conduit to the existing Cherokee (West) Tower Site.
- **No Action Alternative.** Under the No Action Alternative, ADCOM911 would not construct and operate a new wireless broadband network within the 1,200-square-mile operating area that includes Adams County and DIA. ADCOM911 would continue to provide communication, dispatch, and data services using current technology dependent on private cellular carriers for wireless data access.

Summary of Findings for the Preferred Alternative

The EA discloses the potential effects on the following resource areas: noise; air quality; geology and soils; water resources; biological resources; historic and cultural resources; aesthetic and visual resources; land use; infrastructure; socioeconomic resources; human health and safety; and climate, greenhouse gases, and global warming.

- **Noise.** Under the Preferred Alternative, noise would temporarily increase during construction, but the increase would not persist following project completion. Provisions would be included in the plans and specifications requiring the contractor to comply with local and state ordinances for construction noise.
- **Air Quality.** Under the Preferred Alternative, air quality impacts during construction would be primarily from exhaust emissions of construction equipment, employee and delivery vehicles, and fugitive dust. With the implementation of Best Management Practices (BMPs) for fugitive dust, construction of the project would have a negligible impact on air quality.

- **Geology and Soils.** Sedimentation patterns would not be notably altered and no structural movements or changes in seismicity would result. There would be negligible impacts on geology and soils as a result of implementing the Preferred Alternative.
- **Water Resources.** Rates of stormwater runoff after construction would be the same as existing rates. Impacts on water resources would be insignificant for the Preferred Alternative. There would be no impacts to ground water.
- **Biological Resources.** Effects to biological resources would be minimal under the Preferred Alternative. Less than 1 acre of vegetation would be permanently impacted from construction. Wetlands and waters of the U.S. would be avoided during construction of the proposed project and no federally listed threatened or endangered species occur within the project area. Since the project occurs in a mostly urban setting, or adjacent to existing structures that are located on disturbed ground, impacts to wildlife resources would likely be minor.
- **Historic and Cultural Resources.** The State Historic Preservation Officer was consulted and concluded that the Preferred Alternative would have no effect on cultural resources as defined by Section 106 of the National Historic Preservation Act. The Preferred Alternative would have no effect on historic properties.
- **Aesthetic and Visual Resources.** The proposed fiber optic cable would be placed in conduit underground and proposed equipment would be placed on existing towers and buildings. The Preferred Alternative would result in short-term temporary impacts within rights-of-way as construction crews trench, lay cable, bury cable, and revegetate disturbed areas using BMPs. The Preferred Alternative would have no impacts on aesthetic and visual resources.
- **Land Use.** The proposed fiber optic cable would be placed within existing rights-of-way and proposed equipment would be placed on existing towers and buildings. The Preferred Alternative would not require any changes to local land use plans and would have no impacts on land use.
- **Infrastructure.** The Preferred Alternative would bring high-speed Internet and communications connectivity to areas within Adams County that are populated and rural. The Preferred Alternative would provide improved communications, linking multiple PSAPs and other community anchor institutions without high-speed reliable communications connectivity; the proposed project would therefore have a beneficial impact by providing this needed infrastructure.
- **Socioeconomic Resources.** Although the project would increase short-term employment, no substantial change to economic factors from the proposed construction activities or long-term operation of the LTE Broadband Network would occur. For these reasons, there would be no impacts to socioeconomic resources under the Preferred Alternative. The Preferred Alternative would not have disproportionately high, adverse effects on minorities or low-income populations or communities.
- **Human Health and Safety.** The contractor would develop a site-specific health and safety plan for the proposed project, and would safeguard the public through

signage, security, and compliance with construction permits, as appropriate. Traffic control, where applicable, would be provided by a certified flagging company or local law enforcement. With these measures, the Preferred Alternative would not have any adverse affects on human health and safety.

- **Climate, Greenhouse Gases, and Global Warming.** The greenhouse gas (GHG) emissions associated with the Preferred Alternative are well below the Council on Environmental Quality (CEQ) threshold. Therefore, GHG emissions from the Preferred Alternative would not contribute appreciably to climate change or global warming.
- **Cumulative Impacts.** This EA addresses cumulative impacts that could result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts that would result from the Preferred Alternative would not be significant.