

Wichita-Sedgwick County ITS Technical Planning Session Communications Plan Review April 26, 2005

Presented by:

ITERISTM

In association with

RCC Consultants, Inc.

Report Objectives

- Establish Communications Plan that facilitates ITS Architecture Implementation
- Leverage KDOT, City of Wichita, Sedgwick County Mobile Data and AVL Report
- Guide Wichita-Sedgwick County region in planning needs for surface transportation services.

Report Objectives
& Considerations

Stakeholders

Document
Structure

Keys to Success

Open Issues

Final Steps



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Report Considerations

- Project/Agency Needs
- Existing Infrastructure
- Current Infrastructure Projects/Upgrades
- Planned Resources
- Mobile Data Technology
- Current Mobile Data System

Report Objectives
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Selected Stakeholders

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- Kansas Highway Patrol (KHP)
- Sedgwick County Public Works (SCPW)
- Kansas Department of Transportation (KDOT)
- Public Safety Agencies for Sedgwick County and the City of Wichita
- Wichita Airport Authority (Mid-Continent Airport)
- Wichita Fire Department (WFD)
- Wichita Transit
- Kansas Turnpike Authority
- City of Wichita
- CVISN Team
- Local Media
- RWIS (Road Weather Information Systems)
- Sedgwick County
- Suburban Communities
- Utilities
- Wichita IT/IS (Information Technology/Information Services)
- Wichita and Sedgwick County Health Department
- Wichita Police Department

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Document Structure

- Section 1 – Introduction
- Section 2 – Agency/Element Needs Assessment
- Section 3 – Existing Regional Communications Infrastructure
- Section 4 – Planned Communications Resources
- Section 5 – Communications Requirements and Needs Analysis
- Section 6 – Network Architecture Options
- Appendix – Leased Cellular Coverage Maps

Report Objectives
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Section 1-Introduction

- Provide Project Overview
- Identify Architecture Documentation
 - Volume 1 – Architecture
 - Volume 2 – Implementation Plan
 - Volume 3 – Communications Plan
- Describe various sections of communications plan

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Section 2 – Agency/Element Needs Assessment

- Review current communication inventory and the planned projects
- Determine the communication needs of the agencies
- Compare communication infrastructure currently in place with needs of planned projects
- Examine need for new communication infrastructure

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Section 2 – Agency/Element Needs Assessment

- Report Objectives & Considerations
- Stakeholders
- Document Structure
- Keys to Success
- Open Issues
- Final Steps

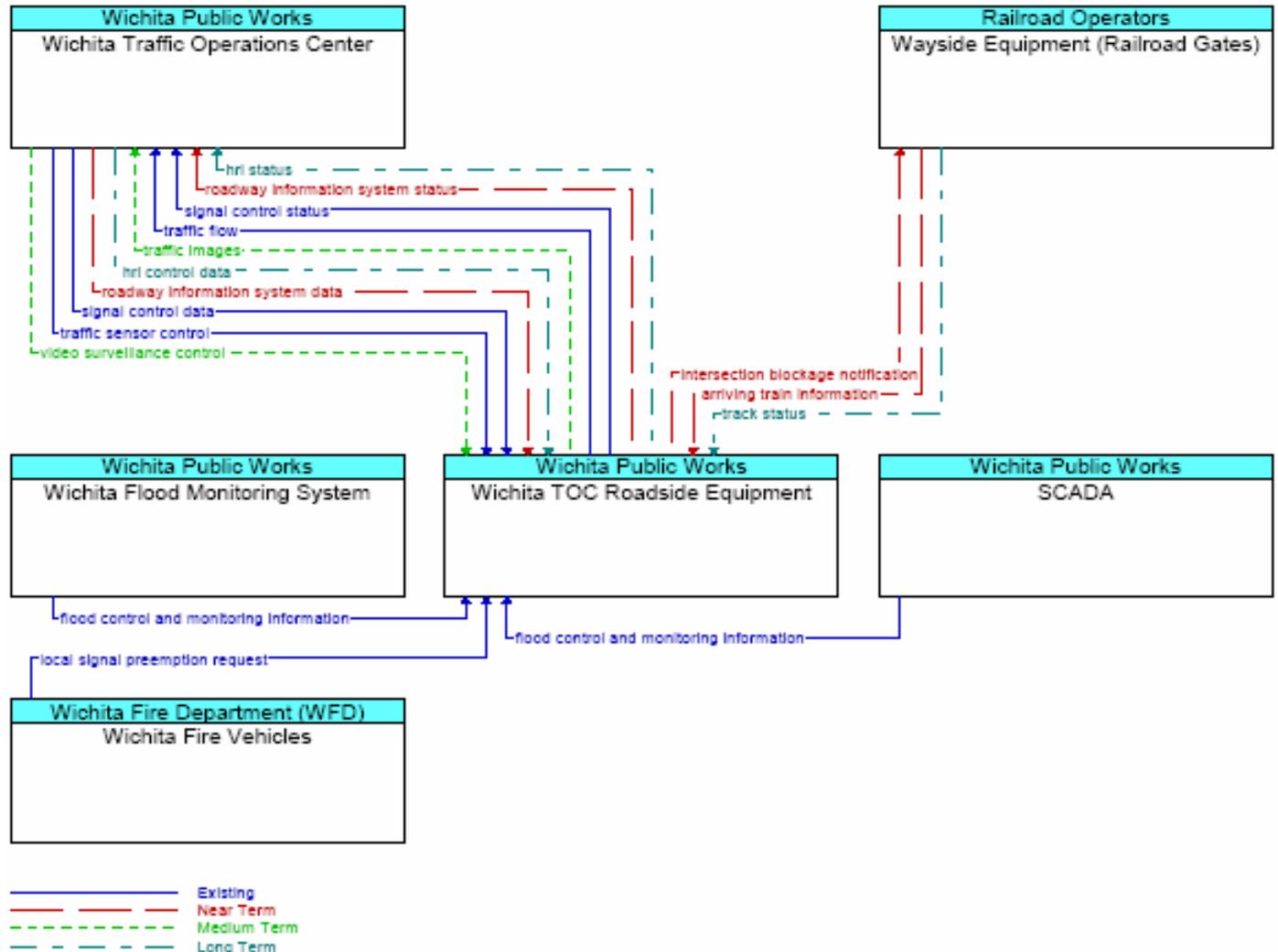


Figure 77. Wichita TOC Roadside Equipment Diagram

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Section 3 – Existing Regional Communications Infrastructure

- Cabled Solutions
 - KANWIN
 - KDOT Fiber
 - Twisted Pair
- Wireless Solutions
 - Dataradio
- Application Infrastructure Relationship
- Comparative Analysis Factors

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Section 4 - Planned Communications Resources

- Cabled Solutions
 - Twisted Pair
 - Coax
 - Fiber
- Wireless Solutions
 - Dataradio (Upgraded)
 - WiMax (Alvarion)
 - Leased Cellular Services
- Hybrid Solutions
- 800 MHz Statewide Radio

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Section 5 - Communications Requirements

- Defines communications system bandwidth requirements
- Most current ITS applications require only 4800 bps
- Only high-bandwidth requirements are for CCTV (1.5 Mbps)

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Section 5 - Communications Needs Analysis

- Identify factors that determine infrastructure solution
- Define architecture entities (centers, roadside equipment, travelers, vehicles)
- Identify communications paths (center-center, center-field, center-vehicle, vehicle-vehicle) and typical bandwidth requirements based on applications

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Section 6 - Network Architecture Options

- Cabled Solutions (pro/con of each)
 - LAN, WAN, MAN
 - Network Topologies
 - Cable Solutions (twisted pair, cable, fiber)
- Wireless Solutions (pros/cons of each)
 - Licensed vs. Unlicensed
 - Spread Spectrum
 - WiMax
 - Mesh
 - Short Range (RFID)
 - Cellular
 - Satellite
 - Microwave

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Keys to Success

- Knowledge of project requirements and existing infrastructure
- Stakeholder input
- Communications Plan complements Integration Plan

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Open Issues

- Review KDOT Study findings when complete
- Need input from stakeholders on existing and planned infrastructure systems and projects

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Final Steps

- Review Draft Report and provide feedback to Iteris/RCC
- Comments will be incorporated into final document
- Public comment period starts May 5th
- MPO presentation May 12th
- Final document May 20th

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Questions?

