

Introduction and Work Program

Technology Planning Toolkit

Oakland County, Michigan

June 2006



*Community Planners
Landscape Architects*

Carlisle/Wortman Associates, Inc.

605 S. Main Street
Suite 1
Ann Arbor, MI 48104

6401 Citation Drive
Suite E
Clarkston, MI 48346

Introduction

Wireless Oakland (www.wirelessoakland.org) is an initiative launched by County Executive L. Brooks Patterson that consists of three goals. The first goal is to blanket the County's 910 square miles with wireless Internet service. The second goal will directly address the County's "digital-divide" and provide low-cost or no-cost PC's and technology training to underserved population groups. Finally, the third goal will develop a Telecommunication and Technology Planning Toolkit that will support continued high-tech investments in local government and promote the integration of those investments with local community character and quality of life.

The Technology Planning Toolkit (TPT) will have two components:

Component 1: *"Planning for Technology"*, will be a guidebook for government agencies within Oakland County that would like to plan for present and future technological investments. Proactive communities have long realized that preparing for and investing in innovative technologies can strengthen local economy, provide additional services, and is essential to attract businesses and residents.

Additionally it will provide information on currently emerging technologies and their application in the planning and economic development process. This will provide direction for future products and technical services that Oakland County will provide to government agencies in support of planning and economic development practices and decision making.

In summary, this component will provide a set of guidelines to assist government staff and officials with incorporating appropriate goals and policies in local master plans and offer model language for inclusion into regulations and ordinances and provide Oakland County direction for future use of technologies in Planning and Economic Development.

Component 2: *"Planning with Technology"*, will establish an information and technology-enabled assistance program that will offer products and services to support continued high-tech investments, and promote the integration of those investments with local community character and quality of life. This component of the Toolkit will build on the County's Geographic Information Systems initiative and will be implemented in multiple phases. *The program will be available to government agencies in support of planning and economic development practices and decision making.* This managed approach to economic development and high-tech investment is a critical component of Oakland County's future. Only the first phase of Component 2 is addressed in this contract.

The first phase will address Context Sensitive Solutions (CSS). Context Sensitive Solutions is defined, by the Federal Highway Administration, as a collaborative, interdisciplinary approach that involves all stakeholders to develop a transportation facility that fits its physical setting and preserves scenic, aesthetic, historic, and environmental resources, while maintaining safety and mobility. CSS is an approach that considers the total context within which a transportation improvement project will exist.

This component of the Toolkit will be a guidebook to be used by Oakland County and the Road Commission for Oakland County to establish an Oakland County Context Sensitive Solutions program.

The guidebook will document a CSS program/process specific to Oakland County:

- Describe generically what CSS is and the benefits of planning and designing transportation facilities using a CSS process,
- Describe the purpose and goals of the Oakland County CSS program,
- Outline the recommended specific steps and tasks of an Oakland County CSS program,
- Make recommendations on when and how a project enters the County CSS program and when a project would be complete,
- Incorporate any necessary and appropriate components outlined in the Request for proposal,
- Provide instruction and guidance to Oakland County and the Road Commission for Oakland County on how to execute the process, steps and tasks of the CCS program, and
- Make recommendations on what software and training is needed to effectively implement the County CSS program.

The guidebook will be used by OC Planning and Economic Development Services:

- To educate local officials, staff, consultants and citizens about CSS and the benefits of using the CSS process,
- In the delivery of computer imaging and 3D modeling services as part of the CSS program, and
- In the execution of the public input portions of the CSS program.

The guidebook will be used by OC Information Technology Department:

- To evaluate request for hardware, software and training related to implementing the County CSS program.

The guidebook will be used by the RCOC to:

- Outline the procedures for applying CSS principles in the development of RCOC road projects.
- Detail the steps to be followed by RCOC staff in amending the environmental review process for road project design and construction.
- Establish the stakeholder involvement process included in all federal aid road construction projects.
- Form the basis of a formal RCOC program of stakeholder involvement and input.
- Indicate to the public how CSS principles work in a county level road project.
- Instruct citizens on methods they can use to get more involved in roadway design.

Work Plan

The following outlines the work program that the project team, consisting of Carlisle/Wortman Associates, Inc. (CWA) and Parsons Brinckerhoff Michigan, Inc. (PB) proposes to follow in developing county-wide strategies for improving and expanding technology/telecommunication infrastructure:

TASK 1.0 PROJECT INITIATION (CWA/PB)

- 1.1 Review work plan with Oakland County staff.
- 1.2 Review roles and responsibilities of Advisory Committee.
- 1.3 Determine schedule of 8 working sessions to take place throughout project with the Advisory Committee and staff for the purpose of communicating project status and facilitating Committee and staff review and comment.

Component 1

TASK 2.0 DEVELOPMENT OF THE PLANNING FOR TECHNOLOGY TOOLKIT (CWA)

- 2.1 Overview of the Wireless Oakland Project
 - (Content of this section to be provided by Oakland County)
- 2.2 Technology Master Plan
 - Research and identify goals and objectives for use in local land use plans.

- Identify policy statements relating to support for wireless communication/technology for local communities.
- Document model language

2.3 Telecommunication Tower and Wireless Communication Location, Design and Zoning Standards

- Research model ordinances
- Identify zoning concepts for possible use
 - Site plan and special use criteria
 - Overlay zones
 - PUD
 - Franchise agreements
- Document model language

2.4 Road Right-of-Way Permitting, Regulation and Jurisdictional Authority

- Research road ROW permit processes at State, County and local levels.
- Identify strengths and weaknesses of various permitting processes, advantages of collaborative efforts in ROW regulation, and benefits of RCOC Master ROW Plan relative to technology planning.
- Document a model process that streamlines the approval process.
- Integrate into GIS format.

2.5 Technology Standards for New Commercial, Industrial, Research, Office and Residential Development

- Research and Identify telecommunications and technology improvements for new construction.
- Document technology standards for new commercial, Industrial, Research, Office and Residential construction
- Document a model broadband connectivity Ordinance in order to promote high-speed internet.

2.6 Technology Standards for Adaptive Re-Use / Redesign of Existing Structures

- Research historical standards.
- Identify challenges with adaptive re-use and redesign while still meeting National Trust for Historic Preservation restoration requirements, when applicable.

- Document design standards for technology improvements for adaptive reuse and historic preservation.

2.7 Overview of Valuable Computer Applications

- Research visualization tools and computer applications that facilitate planning and economic development decision making.
- Identify and document best practices / preferred software for 3D modeling / visualization, review of development proposals, impervious surface analysis and other impacts to the environment.
- Document draft digital submission requirements that would facilitate use of technology in local development proposal review and approval.

2.8 Plan of Action

- List steps for county departments and agencies and local governments to follow to implement the recommendations in the Toolkit.
- Document recommended implementation priorities and primary responsibility for implementation.
- Document recommended local community and public input procedures and adoption process.

2.9 Planning for Technology - Plan Documentation

- Develop into a master document.
- Present Draft Planning for Technology Toolkit to the Advisory Committee
- Revise in accordance with comments from Advisory Committee

Component 2

TASK 3.0 DEVELOPMENT OF THE PLANNING WITH TECHNOLOGY TOOLKIT (CW/PB) PHASE I: County CSS Program

3.1 Development of the Context Sensitive Solutions Program

- Summarize relative Federal and State legislation and policy directives on CSS in regard to establishing a CSS technical assistance program in Oakland County.

- Review Oakland County staff and technology resources regarding CSS
- Work with the County and RCOC to develop a county level CSS project design and delivery process including, but not limited to:
 - Steps necessary to conduct a road character assessment.
 - Steps and techniques to facilitate stakeholder involvement.
 - Make recommendation for the use of technology enabled applications in the CSS assessment, planning and design process.
- Document the anticipated and quantifiable benefits of CSS from existing research.
- Document recommendations for the adoption of CSS in county and local planning and road design practices
- Develop a recommended plan of action to guide Oakland County and the RCOC, in implementing the county CSS Program.

3.2 Definition of Road Image Character Types (the “Before”)

- Develop a system to categorize Oakland County road image types (review the system already developed by Oakland County).
- Organize and describe road types by a series of criteria that may include (consider the use of a matrix to organize the information):
 - Road function
 - Access Management
 - Traffic volumes
 - Land Use
 - Safety Data
 - Other design elements

3.3 Context Sensitive Solutions (CSS) (the “After”)

- Use the methodology of Task 3.1 and 3.2 to develop 1 conceptual illustration representing each character type that demonstrates how CSS improvements and access management tools can enhance community image.
- Document software recommendations, staff training and other issues that can assist the county in developing a “photo image lab” at the conclusion of the project.

3.4 Context Sensitive Solutions Funding Opportunities

- Research and document funding sources including innovative project design and funding options.

3.5 Develop Technical Appendix

- Based on the research in the previous tasks develop the following appendix chapters:
 - Glossary (definitions for CCS and technology).
 - Resource Guide (contacts for further information and research).

3.6 Planning with Technology - Plan Documentation

- Develop into a master document.
- Present Draft Planning with Technology Toolkit to the Advisory Committee
- Revise in accordance with comments from Advisory Committee

TASK 4.0 COMPILE AND DELIVER THE WIRELESS OAKLAND TECHNOLOGY PLANNING TOOLKIT (CWA)

4.1 Compile Final Technology Planning Toolkit Guidebook

- Combine Component 1 and Component 2 into the Technology Planning Toolkit.
- Present the final TPT to the Advisory Committee.

4.2 Plan Implementation

- Meet with the staff to discuss the future relationship and timing of the Wireless Oakland initiative with the implementation of the Technology Planning Toolkit.
- Assist the County staff in preparing for presentations to effectively communicate with local municipalities regarding implementation of the Technology Planning Toolkit.