	ISO 9001-2008 PROCEDURE	PROCESS OWNER Director of Engineering		
PROCEDURE TITLE: Planning & Design Development	DOCUMENT NUMBER: ISO_7-1	REVISION LEVEL: Final Draft	REVISION DATE: 12/14/09	Approval: Managing Director

Purpose/Scope:

This procedure defines the systems for planning and design of road and bridge construction projects.


Responsibility:

The WCRC Engineering Department is responsible for planning and design of road and bridge projects.

ISO 9001:2008 Reference: 7.1 - Planning of Project Realization; 7.2.1 - Determination of Requirements; 7.2.2 - Review of Requirements; 7.3 Design and Development

Procedure:

- 1.0 Requirements for road construction projects are derived from public need relative to maintaining and upgrading the road system to ensure adequate transportation and public safety.
- 2.0 When a road improvement need is identified, a project is proposed to satisfy that need. The Washtenaw County Road Commission develops and plans projects to the Federal Highway Administration (FHWA) and Michigan Department of Transportation (MDOT) documented design guidelines and specifications.
- 3.0 Projects are planned and developed following processes defined by the Michigan Department of Transportation (MDOT) including the following:
 - Local Agency Programs (LAP) Project Planning Guide
 - Grade Inspection Requirements
 - Program Application for LAP Road and Safety Projects
 - Contractors selected from pre-qualified list on MDOT website
- 4.0 WCRC follows design standards that define current best practice derived from road project history and lessons learned.
- 5.0 A Washtenaw County Road Commission project manager is assigned to a project and is responsible for the planning and development process.

	ISO 9001-2008 PROCEDURE	PROCESS OWNER Director of Engineering		
PROCEDURE TITLE: Planning & Design Development	DOCUMENT NUMBER: ISO_7-1	REVISION LEVEL: Final Draft	REVISION DATE: 12/14/09	Approval: Managing Director

6.0 Design plans must adhere to federal and state requirements including:


- Design guidelines and specifications
- Design and development stages (Refer to Local Agency Programs Project Planning Guide)
- Review, verification and validation activities as appropriate
- Responsibilities and authorities
- Management and coordination between WCRC, Consultants, Vendors and Contractors

7.0 Inputs to the design and development of road construction and maintenance projects are derived from the following as applicable:

- Township/public input
- Federal, state and local requirements
- Environmental Protection Agency
- Road Soft PASER Ratings
- Past project history

8.0 The Project Manager documents project requirements on a project data work sheet and includes the following project data:

- Project name & number
- Termini
- Length
- Location
- Roadway information
- Purpose
- Scope
- Funding sources
- Costs
- Design life and year
- Requirements for drawings
- Other specifications and requirements as necessary

	ISO 9001-2008 PROCEDURE	PROCESS OWNER Director of Engineering		
PROCEDURE TITLE: Planning & Design Development	DOCUMENT NUMBER: ISO_7-1	REVISION LEVEL: Final Draft	REVISION DATE: 12/14/09	Approval: Managing Director

9.0 The planning process follows a Planning Guide template that includes the following steps:


- Submit for Type, Size and Location (TS&L) or Pre Grade Inspection (GI)
- Submit Program Application
- Submit GI package
- Attend GI meeting
- Submit Right of way (ROW) certification, final plans, proposal and estimate
- Submit Reproducible plans to LAP
- Set advertise date for bidding
- Set letting date
- Submit bids to Transportation Commission or WCRC Board for review and approval
- Submit bids to AD Board for review and approval on Federal and State funded projects.

10.0 Design reviews are incorporated into the schedule documented in the LAP Project Planning Guide.

11.0 Prior to submission to the state and local agencies, the design package goes through a final review by the project manager and Director of Engineering to verify the design meets stated requirements. The output of design and planning is a package submitted to the state of Michigan and appropriate local agencies (Refer to Program Application for Local Agency Projects, Road & Safety Projects).

12.0 Execution of the Program Application for LAP with approvals by WCRC, MDOT or Local authorities for locally funded projects, constitutes a record of review of all requirements. Validation of road project designs and plans is performed by the State of Michigan to ensure road project designs meet the following:

- Stated requirements
- Intended use and community needs
- MDOT regulations
- Federal Highway Administration regulations
- EPA, MDEQ and local regulations /environmental concerns

	ISO 9001-2008 PROCEDURE	PROCESS OWNER Director of Engineering		
PROCEDURE TITLE: Planning & Design Development	DOCUMENT NUMBER: ISO_7-1	REVISION LEVEL: Final Draft	REVISION DATE: 12/14/09	Approval: Managing Director

13.0 When projects are fully approved, the process continues to project execution (Refer to Project Management and Control, 7.5.1).

14.0 Final designs and plans are controlled using date and revision blocks on all drawings, project plans and other related documentation. Each project is assigned a unique project number to further control project plans.

15.0 Revisions and changes to final project designs and plans must be reviewed and approved. Minor changes may be approved by the Director of Engineering or designee. Major changes may require review and approval by MDOT and possibly the Federal Highway Administration. Determination of the level of approval required is the responsibility of the Director of Engineering.

16.0 Records of the review and approval of design or project changes are maintained in the WCRC project file.