

Chapter 34  
LAND USE IMPACTS

**MDT ENVIRONMENTAL MANUAL**

*October 2010*



**Table of Contents**

<b><u>Section</u></b>	<b><u>Page</u></b>
34.1 OVERVIEW.....	34-1
34.2 LAWS, REGULATIONS AND GUIDANCE.....	34-2
34.2.1 23 USC 139 “Efficient Environmental Reviews for Project Decision-Making”.....	34-2
34.2.2 FHWA Technical Advisory T 6640.8A.....	34-2
34.2.3 Community Impact Assessment Guide.....	34-2
34.2.4 NCHRP Report 456 <i>Guidebook for Assessing the Social and Economic     Effects of Transportation Projects</i> .....	34-2
34.3 PROCEDURES.....	34-3
34.3.1 Information Gathering.....	34-3
34.3.2 Analysis and Findings.....	34-4
34.3.3 Mitigation and Commitments.....	34-6

**List of Figures**

Figure 34-1 Land Use Analysis.....34-7

## Chapter 34

# LAND USE IMPACTS

### 34.1 OVERVIEW

The way land is developed and used for various activities affects quality of life and the environment. This Chapter provides guidance and procedures for identifying and evaluating the potential effects proposed project alternatives may have on current and planned land development and use (e.g., residential, commercial, industrial, parkland, open space). Land use topics include designations created by a Tribe, county, or city through land use plans (General Plans, Comprehensive Plans, etc.), zoning, future land use and growth management areas, urban infrastructure service boundaries, annexation plans, and past, existing and future development trends. The planning, design and construction of roads and highways, as well as other transportation modes, are often based on currently projected land use development patterns and trends and can affect existing land uses, and plans and proposals for future development. Safe and efficient travel, whether walking, taking a car, an airplane or a bike, is also influenced by the types and patterns of land uses.

The sections below provide guidance on the land use impact analysis for MDT's projects, including secondary effects (e.g., social, economic, environmental) of substantial, foreseeable development the project could induce. There are no land use specific regulations with which FHWA and MDT must comply; however, the land use analysis should assess the consistency of the project or alternatives with the comprehensive development plans adopted for the area.

## 34.2 LAWS, REGULATIONS AND GUIDANCE

### 34.2.1 23 USC 139 “Efficient Environmental Reviews for Project Decision-Making”

For projects involving preparation of an environmental impact statement and for environmental assessments being prepared in accordance with the FHWA “SAFETEA-LU Environmental Review Process Final Guidance,” this Part of the *United States Code* (USC) requires that, at appropriate times during the study process, the lead agency or agencies for the project collaborate with agencies serving as participating agencies to determine the methodologies to be used and the level of detail required for assessing impacts, including land use impacts. See [Chapters 11 “Preparing Environmental Documentation,” 13 “Environmental Assessment/FONSI”](#) and [14 “Environmental Impact Statement/ROD”](#) for further guidance on this requirement.

### 34.2.2 FHWA Technical Advisory T 6640.8A

The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, includes guidance for addressing land use impacts. The Technical Advisory indicates the analysis of land use impacts should:

- identify current development trends and State and/or local government plans and policies on land use and growth in the area the proposed project will affect;
- assess the consistency of the project alternatives with comprehensive development plans adopted for the area; and
- identify secondary social, economic and environmental impacts of any substantial, foreseeable, induced development associated with each alternative, including adverse effects on existing communities.

### 34.2.3 Community Impact Assessment Guide

Additional guidance on analysis of land use impacts is available in *Community Impact Assessment: A Quick Reference for Transportation*, FHWA-PD-96-036, September 1996. This document is available on the FHWA website.

### 34.2.4 NCHRP Report 456 *Guidebook for Assessing the Social and Economic Effects of Transportation Projects*

This publication includes useful information on evaluation of land use impacts of transportation projects and can be found on the Transportation Research Board website.

### 34.3 PROCEDURES

Figure 34-1 provides a flowchart of the recommended steps for conducting a land use impact analysis.

#### 34.3.1 Information Gathering

The Preliminary Field Review (PFR) is the initial step in the land use analysis process for a proposed project. The Design Team (DT) notifies and invites appropriate MDT personnel, including the Project Development Engineer (PDE) within the MDT Environmental Services Bureau (ESB) to the field review. The PDE reviews the list of ESB attendees and includes others as necessary to ensure appropriate ESB personnel are in attendance. The PDE participates in the PFR to make a preliminary evaluation of available information on the project scope and the need for further detailed land use analysis. Following the field review, the DT prepares a PFR Report summarizing the issues discussed during the PFR, including land use issues. The DT distributes the final PFR Report for review and comment. Within ESB, the PDE serves as the document champion to collect and coordinate comments from the other Sections. The PDE compiles the comments into a PFR review memorandum for signature by the Environmental Services Bureau Chief.

For some types of projects that involve relatively minor scopes of work, such as Categorical Exclusion-type projects listed in Title 23 of the *Code of Federal Regulations* (CFR), Subpart 771.117 (c) and (d), a detailed land use analysis may not be required. The exception would be if the project involves displacements/relocations or acquisition of right-of-way or easements (e.g., scenic easements) that could influence land use and/or development. If the PDE determines a detailed land use analysis is not required, the PDE documents the basis for the determination in the project file.

If a detailed land use analysis is needed, it is initiated when alternatives for the proposed project are first being developed, prior to the formal initiation of the NEPA process. Information gathering for the land use impacts analysis is coordinated with information gathering for other impact analyses needed for the proposed project (e.g., noise, right-of-way and relocations, social, economic), depending upon the project's location and scope. The PDE begins the land use impact analysis by describing the affected environment, based on the extent to which construction and operation of each alternative is likely to affect ongoing uses of the adjacent land.

The PDE gathers information on current and proposed land uses for the affected areas to provide a clear understanding of prevailing land uses, community growth patterns and conservation/preservation areas that may be affected. The level of detail provided in the document depends on the complexity of the project and the project area. When it is reasonable to assume that land use changes may result from a project, appropriate information gathering should review the following topics:

- The proportion of rural and urban land in the affected area and the associated city, county or region. This information will provide a general understanding of the amount of developed and undeveloped lands in the project area.

- Current major land uses in the affected area and any associated city, county or regional plans. This information will be used to analyze any potential land use changes or land use conflicts associated with the proposed project.
- Developable land areas made more accessible by the proposed project and the current zoning of those areas. This information will be used to analyze any growth inducement potential of the proposed project.
- Development trends in the affected area and the associated city, county, region, and/or reservation, including information on specific developments (e.g., the development's name; whether it is proposed, platted, under construction or existing, size, type of use, density). The time frame for review of development trends varies depending upon the area involved. This information is used to assess the growth potential of the affected area.
- County, local, and/or Tribal government plans and policies regarding land use controls and community growth management in the project area. This information provides guidance on which lands may be developed.

Information on existing and planned land use is typically available from regional, local and Tribal agencies. County, city and Tribal governments may have land use plans that document existing and planned future land use within the limits of their legal jurisdiction. For largely rural areas, planning departments may have less data and generalized Statewide data may need to be used. For urban and suburban land, obtain data that differentiates light industry, heavy industry, commercial, retail and residential uses, if available. For residential uses, obtain data on residential density, typical market values and whether the dwellings provide single or multi-family housing. Use these sources to obtain information on the type of land use (e.g., urban, suburban, parks, agricultural, pastureland, riparian corridors or unused grassland, shrubland or forest).

Future land use assumptions at the regional level may differ from those at the local level. Regional figures often are required for NEPA traffic, noise and air quality analyses. If differences between regional and local figures are substantive, identify the differences.

The MDT website provides information on MDT contacts. The following entities also may be contacted as applicable to gather data and discuss potential mitigation:

- city, county, and/or Tribal professional staff (e.g., city, county, Tribal planners);
- civic organizations (e.g., Chamber of Commerce);
- neighborhood groups; and
- Metropolitan Planning Organizations.

### **34.3.2 Analysis and Findings**

For projects requiring a detailed land use impact analysis, the PDE uses the information obtained in the Information Gathering step and analyzes the findings. Analysis involves envisioning what will happen during and after construction and operation of each project facility and how that activity will affect the ongoing uses of the adjacent land and plans for land use in the area. Often, the need for a transportation project will have been identified by the city, county

or Tribal government, which would, therefore, have been involved since the very early planning of the project. Implementation of some projects may have potential to induce growth beyond what has been anticipated by the local planning departments. The PDE coordinates this analysis with other environmental impact analyses applicable for the proposed project (e.g., noise, right-of-way and relocations, social, economic) and accomplishes the following tasks.

- Assess direct land use changes, including quantification of the estimated amount of right-of-way to be acquired, description of the current use of that land and analysis of the likely outcomes of converting that land to transportation use, including potential effects on the county's tax base.
- Assess indirect and secondary land use changes, including preliminary determination of the effect the project is likely to have on existing and planned land use in the project area.
- Determine changes that are likely to occur because of the project, based on the existing and future types of land use and developable land within the project area.
- If there are development trends in the project area, evaluate how the project may complement or conflict with the trends (e.g., through growth the project may induce).
- Assess and evaluate the consistency of project alternatives with any comprehensive plans adopted by local, regional and/or Tribal agencies for the community.
- Determine the consistency of the proposed project with local planning.
- Evaluate the consistency of project alternatives with local zoning, where zoning is applicable, and how the alternatives may contribute to land use change in the project area.
- If a project is inconsistent with aspects of local, regional and/or Tribal plans, identify the elements in conflict.
- Under certain circumstances, complete compliance of a project with planned regional and local growth policies may be impossible. For these situations, weigh against the aspects of the plans that are inconsistent with the project's purpose and need.

Based on the land use impact analysis, the PDE documents the following findings:

- current development trends, the State, local and/or Tribal government plans and policies on land use and growth in the area the proposed project will affect and, where practical, identification of the distribution between planned and unplanned growth (to provide an indication of how much of the growth is consistent with plans and how much is not);
- consistency of the project alternatives with the comprehensive development plans adopted for the area and, if applicable, other plans used in the development of the transportation plan required by 23 USC 134 "Metropolitan transportation planning;"
- likely direct land use impacts of right-of-way acquisition for proposed alternatives and secondary social, economic and environmental impacts of any substantial, foreseeable,

induced development for each alternative, including adverse effects on existing communities; and

- recommendations for mitigation of potential direct and indirect adverse social, economic and environmental impacts.

The PDE uses information from the land use impacts analysis and mitigation evaluation to prepare the environmental documentation for the project. See [Chapters 12 “Categorical Exclusion,” 13 “Environmental Assessment/FONSI” and 14 “Environmental Impact Statement/ROD”](#) for guidance on the presentation of the land use impact information in the environmental documentation.

### **34.3.3 Mitigation and Commitments**

The majority of MDT reconstruction projects are generally consistent with regional and local planning efforts and do not negatively impact the existing or future land use. However, if the project would be expected to cause an impact to existing or future land use or is inconsistent with aspects of regional or local plans, the PDE will evaluate practical mitigation measures. The PDE will coordinate, as appropriate, with affected agencies and the public to determine if appropriate mitigation measures can be implemented to address the impacts and/or inconsistency.

Examples of potential mitigation measures include:

- rerouting or shifting the alignment to avoid or minimize land use impacts;
- using elevated or depressed roadways, berms or walls to constrain sight of and noise from the project; and/or
- limiting the number of interchanges to minimize incompatible land-use development.

In evaluating potential mitigation, the PDE will recognize that mitigation measures come with a cost that must be balanced against potential benefit to the affected community. The PDE will coordinate with the design team and the District Administrator to determine appropriateness of potential mitigation measures. To the extent possible, the PDE and DT should prepare the contract documents using the *MDT Standard Specifications* to minimize the need for special provisions.

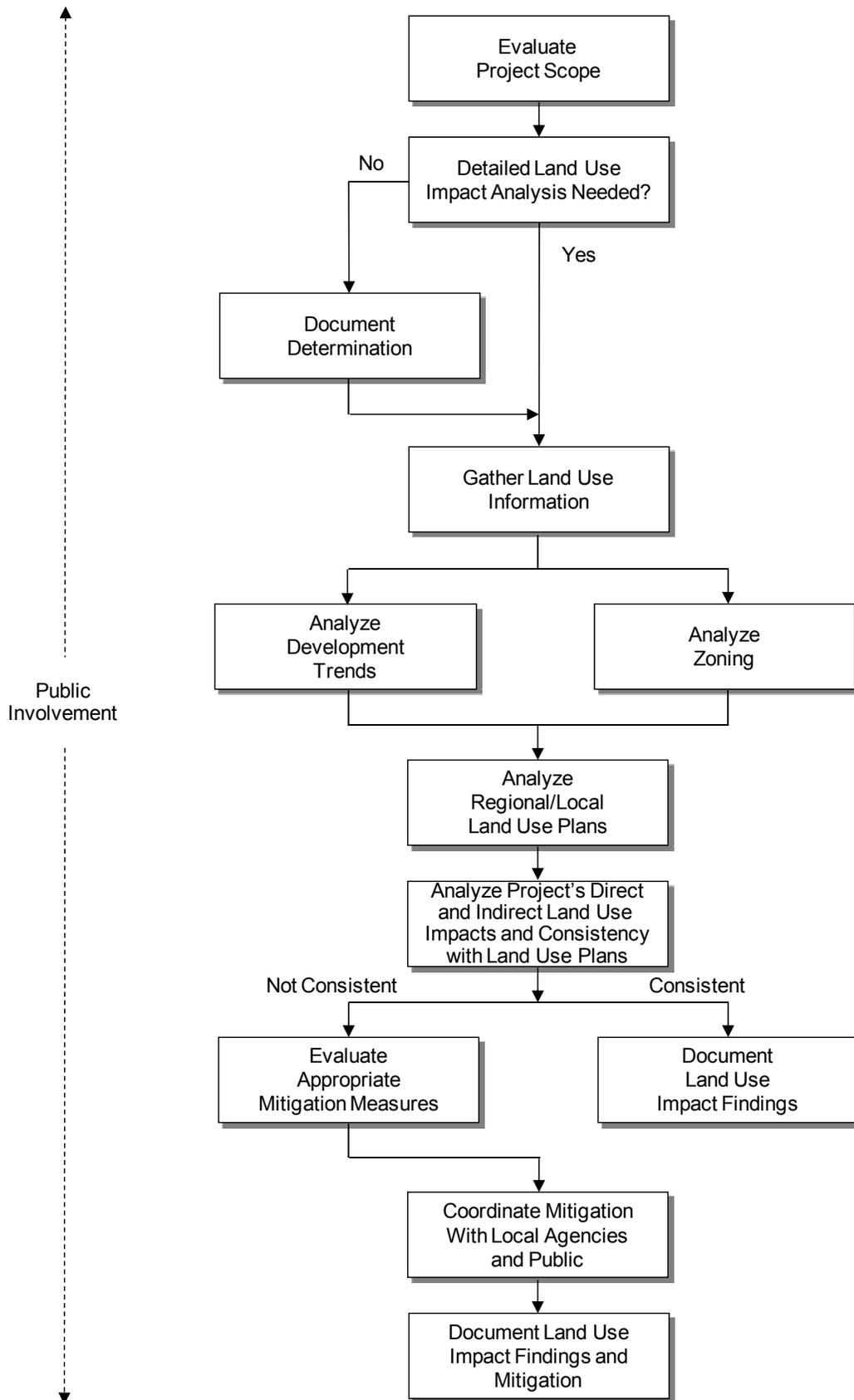


Figure 34-1 — LAND USE ANALYSIS

