

Chapter 20  
ECONOMIC IMPACTS

**MDT ENVIRONMENTAL MANUAL**

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## Chapter 20

# ECONOMIC IMPACTS

### 20.1 OVERVIEW

The following Sections provide guidance for analyzing a project's potential impacts, both positive and negative, on the economic conditions of affected communities. It also provides guidance for evaluating measures to avoid, minimize or reduce adverse economic impacts. The level of analysis required is based on the level of economic impacts a project is likely to involve. Examples of project aspects that may indicate potential for direct and/or indirect economic impacts include:

- need for additional right-of-way;
- potential for residential and/or business displacements;
- potential to increase or decrease the flow of traffic to existing businesses (e.g., as a result of improvement of transportation facilities leading to the businesses, disruption of access to the businesses, providing bypasses around communities);
- temporary employment opportunities associated with project construction;
- potential for opening new areas to development; and
- potential for construction-stage impacts (e.g., disruption of access, creation of dust, noise) affecting special events (e.g., rodeos, fairs), or tourist season attractions that stimulate economic activity.

For transportation projects with no, or only minor, effects on the local economy, the economic impact analysis and findings will be brief and may be based on information taken from existing documents, if available (e.g., planning reports). For projects involving more substantial effects on the economy of a neighborhood, community and/or region, the impact analysis and findings will be more in-depth to address the full range of potential effects.

One of the most critical questions to address for the economic impact analysis is identification of the appropriate geographic unit or area in which the analysis will be conducted. The geographic scope of the analysis should be defined broadly enough to consider potential spillover effects. Examples include effects on people who live outside the project area but work at businesses the project may affect or residents in the project area whose commute times to jobs outside the project area may be affected.

The economic impact analysis is coordinated as a part of the process for compliance with the *National Environmental Policy Act* (NEPA) (42 USC 4321, et seq.) and the *Montana Environmental Policy Act* (MEPA) (MCA 75-1-101, et seq.). The results of the analysis are reflected in the environmental documentation prepared for NEPA/MEPA. See [Chapters 11](#) "Preparing Environmental Documentation," [12](#) "Categorical Exclusion," [13](#) "Environmental Assessment/FONSI" and [14](#) "Environmental Impact Statement/ROD."

## 20.2 LAWS, REGULATIONS AND GUIDANCE

### 20.2.1 **42 USC 4601 through 4655 “Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs”**

These Parts of the *United States Code* (USC) codify the provisions of the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*. They establish a uniform policy for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a Federal agency or with Federal financial assistance. The primary purpose of these parts is to ensure that such persons do not suffer disproportionate injuries as a result of programs and projects designed for the benefit of the public as a whole and to minimize the hardship of displacement on such persons.

### 20.2.2 **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 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 economic impacts. See [Chapters 11 “Preparing Environmental Documentation,” 13 “Environmental Assessment/FONSI” and 14 “Environmental Impact Statement/ROD”](#) for further guidance on this requirement.

### 20.2.3 **Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”**

Executive Order 12898 reinforces the inclusion of economic impact analysis in NEPA documentation because it requires special attention be given to disproportionately high and adverse human health or environmental effects on low-income populations and minority populations. For more information on Executive Order 12898 and Environmental Justice, see [Chapter 24 “Environmental Justice.”](#)

### 20.2.4 **DOT Order 6640.23 “FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations”**

This Department of Transportation Order provides the framework for the Federal Highway Administration (FHWA) to use in complying with Executive Order 12898; see [Chapter 24 “Environmental Justice.”](#) It describes FHWA policy for evaluating environmental, public health and interrelated social and economic impacts of its programs, policies and activities. It also sets forth FHWA policy for considering alternatives and measures to avoid, minimize and mitigate disproportionately high and adverse effects on minority or low-income populations.

### **20.2.5 49 CFR 24 “Uniform Relocation Assistance and Real Property Acquisition for Federal and Federally-Assisted Programs”**

This Part of the *Code of Federal Regulations* (CFR) implements the provisions of 42 USC 4601 through 4655, including the following:

- ensuring that owners of real property to be acquired for Federal and Federally assisted projects are treated fairly and consistently;
- encouraging and expediting acquisition by agreements with owners, to minimize litigation and relieve congestion in the courts, and promote public confidence in Federal and Federally assisted land acquisition programs;
- ensuring that persons displaced as a direct result of Federal or Federally assisted projects are treated fairly, consistently and equitably so that individuals will not suffer disproportionate injuries as a result of projects designed for the benefit of the public as a whole; and
- ensuring that agencies implement these regulations in a manner that is efficient and cost effective.

### **20.2.6 FHWA Technical Advisory T 6640.8A**

The FHWA Technical Advisory T 6640.8A, dated October 30, 1987, includes guidance for economic impact analysis. According to the guidance, where there are foreseeable economic impacts, the analysis should address the following aspects for each alternative, commensurate with the anticipated level of impact:

1. Regional and/or Local Economy. Evaluate the impacts of the project on the regional and/or local economy (e.g., effects of the project on development, tax revenues and public expenditures, employment opportunities, accessibility, retail sales). Where substantial impacts on the economic viability of affected municipalities are likely to occur, include a discussion of the impacts. Also, include a summary of any efforts undertaken and agreements reached for using the transportation investment to support both public and private economic development plans. To the extent practical, this discussion should rely upon results of coordination with and views of affected State, county and city officials and studies performed under 23 USC 134 “Metropolitan transportation planning.”
2. Highway-Related Businesses. Determine the impacts on the economic vitality of existing highway-related businesses (e.g., gasoline stations, motels) and the resultant impact on the local economy. For example, the loss of business or employment resulting from building an alternative on a new location bypassing a local community.
3. Business Districts. Consider the impacts of the proposed action on established business districts and any opportunities to minimize or reduce these impacts by the public and/or private sectors. This concern is likely to occur on a project that might lead to or support new large commercial development outside of a central business district.

**20.2.7 FHWA Community Impact Assessment Guide**

The FHWA publication, *Community Impact Assessment: A Quick Reference for Transportation*, (FHWA-PD-96-036), includes guidance on the analysis of economic impacts of proposed transportation projects. This document is available on the FHWA website.

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

This *Guidebook* defines 11 general types of social and economic effects (e.g., economic development, property values, distributive effects) and provides insights into, and evaluations of, the methods, tools and techniques available to assess them.

**20.2.9 Manual on Uniform Traffic Control Devices (MUTCD)**

The *MUTCD* contains the national standards governing all traffic control devices. It provides key guidance for temporary traffic control during construction to provide for the safety of motorists, bicyclists, pedestrians, workers, enforcement/emergency officials, etc. It also provides guidance for advance warning and detour signing that can be used to minimize potential traffic congestion and maintain safe access to businesses, etc., using detours and alternative routes.

## 20.3 PROCEDURES

### 20.3.1 Information Gathering

The Preliminary Field Review (PFR) is the initial step in the analysis of economic impacts 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 potential for economic impacts. Following the field review, the DT prepares a PFR Report summarizing the issues discussed during the PFR, including economic impact 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 projects subject to the requirements of 23 USC 139 “Efficient Environmental Reviews for Project Decision-Making,” the PDE, in cooperation with the FHWA, collaborates with participating agencies in determining the appropriate methodologies to be used and the level of detail required in the analysis of economic impacts of project alternatives.

Following the PFR, the PDE gathers information for performing a detailed assessment of the project’s potential for economic impacts. The information gathering may involve a variety of methods and sources, including:

- conducting on-line and/or documentary research to obtain information on local economies, economic base, business and marketing information, etc. Examples of useful sources include:
  - + Montana Department of Commerce – Census and Economic Information Center website, for access to a broad range of economics and business information at the State, county and local level;
  - + US Census Bureau – Economic Census website, for economic information from the national to the local level;
  - + yellow pages or city directories for information on locations and types of businesses;
  - + Dun and Bradstreet databases for information on business locations, types and numbers of employees;
  - + Donnelley Directory for information on business locations, types and numbers of employees;
  - + tax records for information on property values and property tax revenues;
  - + metropolitan area transportation planning studies for information on economic growth and development plans;

- + building permit records for information on approved or constructed development; and
- + real estate market surveys, regional real estate journals and interviews with realtors for information on housing prices, trends in sales, age or characteristics of structures;
- requesting information from State and local government planning and social service agencies (e.g., regarding economic base, taxing districts, property tax records, economic programs, population and income projections, business and marketing information);
- requesting information from State employment agencies or labor departments (e.g., regarding employment trends, unemployment rates, economic base);
- conducting field or windshield surveys and reviews (e.g., to identify activity patterns and locations, numbers and types of businesses); and
- obtaining information on business and economic issues through project scoping, public involvement and contacts with other sources (e.g., interviews with Chambers of Commerce, businesses groups in the area, owners/representatives of individual businesses that may be affected).

### **20.3.2 Documentation of Economic Environment Profile**

The PDE uses the information gathered to develop and document a profile of the economic environment. The profile addresses the topics for the area(s) the project potentially will affect, commensurate with the level of anticipated economic impact from the project. The PDE may incorporate changes in the profile as additional information is obtained through ongoing coordination, research and public involvement. Topics that may be addressed include the following:

1. Economic Base. This topic describes the potentially affected businesses and other entities that generate revenue and/or provide employment opportunities for the area. The information for this topic should address the following:
  - numbers, locations and types, including agriculture/agribusiness, manufacturing/industrial, wholesale/distribution, retail, service (e.g., hotels, personal and business services, repair shops, health and legal services), tourism, finance/insurance/real estate, transportation, communications and government;
  - numbers, locations and types of highway-related businesses (e.g., gasoline stations, motels);
  - location and boundaries of established business districts, types of businesses present, age and condition of business structures, and characteristics that support or detract from the viability of the business district (e.g., aesthetic amenities such as landscaping, pedestrian malls, limited access, noise and vehicle fumes due to traffic congestion) and plans for expansion or modification;

- number of employees for each potentially affected business/entity and identification of major employers;
  - current sales/revenue levels for existing businesses/business sectors and identification of the dominant economic sector(s) for the area; and
  - workforce characteristics, including average age of workforce, workforce participation and characterization (e.g., professional, blue collar, unskilled, numbers employed in each economic sector), average family income, employees' residence locations in relation to employment locations, current employment openings and current unemployment levels.
2. Development. This topic describes current/planned local and regional development and development trends.
3. Tax Revenues and Spending. This topic describes items such as the following regarding taxes and spending:
- property tax base (e.g., current extent and assessed values of taxable properties) and associated property tax revenues;
  - local taxing authorities (e.g., local school districts, township fire districts, county library districts) and their respective jurisdictional areas;
  - sales tax revenues; and
  - local and regional government spending plans (e.g., for staff, services, infrastructure).

### **20.3.3 Analysis and Findings**

The PDE uses the economic environment profile and the results of public involvement and ongoing coordination with the DT to begin the identification and analysis of the project's potential economic impacts. The analysis involves characterizing the existing state of the economic environment, forecasting how it may change if a given action or alternative is implemented and evaluating measures for avoiding, minimizing or reducing potential adverse economic impacts.

#### **20.3.3.1 Analysis Tools**

As necessary, the PDE may conduct additional research and/or apply a variety of analysis tools to forecast/analyze potential effects and evaluate possible mitigation measures. Examples of potential analysis tools include the following:

- input/output models (e.g., to provide estimates of how economic activity translates into employment and income);
- comparisons (e.g., case studies of similar transportation actions in other locations, using analogies and examining similarities and differences over time or across areas);

- mapping overlays (e.g., plotting various maps showing businesses, tax districts existing and planned commercial/industrial development, project alternatives and superimposing them to create a composite image);
- expert consultation (e.g., roundtable discussions and reports);
- peer review (e.g., consultation with professionals within the transportation field);
- brainstorming (e.g., generating ideas through quick-response reactions);
- Delphi technique (i.e., a structured form of reaching consensus among experts for problem solving);
- market research (e.g., focus groups, targeted surveys, interviews, questionnaires); and
- public involvement (e.g., public meetings, workshops, citizen advisory groups).

### 20.3.3.2 Approach

The following are approaches the PDE may use in applying these analysis tools:

1. Comprehensive Approach. In this approach, the PDE gathers as much relevant information as possible, examines the information and then reaches a conclusion.
2. Incremental Approach. In this approach, the PDE builds on information a bit at a time until a conclusion is reached.
3. Comparative Approach. In this approach, the PDE identifies similarities and differences from past experience.

Regardless of the approach or combination of approaches used, the process involves making projections about the future of the affected economic environment “with the project” as compared to the future “without the project.”

### 20.3.3.3 Identification and Evaluation

In conducting the economic impact analysis, the PDE considers both negative and positive effects, and short-term and long-term effects. Examples include temporary access disruption associated with project construction and improved, safer access and improved levels of service associated with the permanent features implemented by the project. The PDE also considers potential indirect (secondary) and cumulative economic impacts; see [Chapter 25 "Indirect \(Secondary\) and Cumulative Impacts."](#)

The PDE evaluates the likelihood of economic effects, their potential magnitude and extent, negative or positive characteristics, and for potentially adverse effects, their reversibility.

Listed below are various factors the PDE may consider in identifying and evaluating potential economic impacts for a specific project or alternative. The factors are grouped according to the areas addressed in the economic environment profile. For factors determined applicable for a

project/alternative, the PDE coordinates with the DT, conducts additional information gathering, and applies the analysis tools and approaches discussed above, as necessary, to characterize the potential effects on the local/regional economy:

1. Economic Base.

a. Displacement/Relocation Effects.

- Numbers, locations and types of businesses/farms to be displaced, including identification of any major employers to be displaced and any displaced businesses/farms that have unique characteristics (e.g., specialty products, unique customer base).
- Availability of suitable sites for relocation in the area and likelihood the displaced entities will stay in the area, move to a different area or go out of business (e.g., farming operations that are unable to find suitable relocation sites or that have become too small to continue operation due to the amount of farmland converted by the project). Include consideration of the effects of relocation assistance programs, if available.
- Effects of business and/or residential displacements/relocations on customer base, market characteristics (e.g., diversity of businesses types available) and revenues.
- Effects of displacements/relocations on current workforce and employment opportunities (e.g., numbers and types of existing employees potentially affected, number of job openings eliminated) and effects on communities from loss of employment/income.
- Amount of farmland taken out of production and effects in terms of loss of jobs/income directly (e.g., loss of farm labor jobs) or indirectly (e.g., farm implement business). Include consideration of direct/indirect encouragement of conversion of farmland beyond the right-of-way (e.g., conversion of adjacent land to urban or residential uses due to increases in assessed land value/taxes that make farming less profitable).

b. Business Environment/Accessibility Effects.

- Alterations in visibility or access for highway-related businesses (e.g., increased capacity and level of service on facility serving the businesses, use of detours or bypasses that reduce visibility and access) and the likely effects on the level of business activity and employment at these establishments.
- Changes in the accessibility and/or business environment characteristics of established business districts and their likely effect on business activity and revenues. Examples include effects on motorist and non-motorist access (e.g., from project barrier effects, temporary detours, bypass routes); changes in availability of parking; and changes in noise, air

quality, aesthetics, amenities and/or traffic volumes and speed in established business districts.

- Changes in access to manufacturing/industrial businesses, including temporary or long-term disruption of supply input/product output routes and the resulting effects on the costs for shipment of materials and goods from/to suppliers, wholesalers and retailers, and the viability of the businesses.
- Changes in access for retail and service businesses, tourist attractions, finance/insurance/real estate businesses, wholesale/distribution businesses and/or transportation businesses and the effects on activity levels, revenues and viability (e.g., changes that relieve or increase traffic congestion or otherwise improve or disrupt access for customers and movement of goods).
- Effects of increased/decreased regional accessibility on long-term agribusiness activity (e.g., as a result of costs associated with access to markets, storage facilities, processing plants).

c. Economic Input Effects of Project Construction. Potential positive effects of project construction activities on the local economy, including:

- effects from wages paid to construction workers that may be spent on housing, food, clothing, etc., within the region; and
- effects from purchase of materials and supplies from local firms/suppliers that results in revenue spent on employee wages, raw materials and other components; job creation to respond to increased demand; overhead spent on rent and inventory; and increases in use of local businesses and services.

In analyzing this factor, the PDE recognizes that the effect of a highway construction project on the local economy will depend on the extent to which overhead, profit, equipment costs, etc., accrue to local contracting firms and businesses.

## 2. Development.

### a. Land Use Effects.

- Potential for encouraging new or expanded development by increasing capacity on existing facilities or providing access to new areas.
- Potential for inducing heavy or rapid growth in project area (e.g., by greatly improving access).
- Potential for encouraging businesses to relocate to other locations within the area, close or move outside the area (e.g., due to changes that

redirect traffic flow away from existing business locations or as a result of competition from induced development).

- b. Consistency with Plans. Compatibility of the project with current economic development plans and the potential economic consequence of any incompatibilities (e.g., potential to induce commercial development in areas planned for other uses, potential to take traffic away from established business districts planned for expansion).

3. Tax Revenues and Spending.

a. Tax Base Effects.

- Nature and extent of likely effects on the property tax base (e.g., due to acquisition of taxable property for the project, changes in property values and/or induced development). In evaluating this factor, the PDE considers the potential for short-term declines in tax revenue as property is removed from the tax rolls and long-term increases in tax revenue as new businesses or residential areas are developed as a result of the project.
- Nature and extent of likely effects on sales tax revenues (e.g., reduction in sales tax revenue due to impairment of access to businesses or due to businesses closing or relocating out of area after displacement; increase in sales tax revenues from induced commercial development or improved access to existing businesses).
- Local taxing authorities affected by potential changes in tax revenues and likely extent of effects on each.

b. Spending Effects.

- Extent to which the project is likely to cause increased local tax expenditures as a result of induced growth effects that place additional pressure on existing public services, facilities/infrastructure.
- Affected local taxing authorities and extent of likely effects on expenditures for each (e.g., for school construction and improvements, for construction of new fire stations, for upgrading city, county or township roads/streets).

If adverse economic impacts are identified, the PDE and DT coordinate to evaluate measures to avoid, minimize or reduce the impacts. The nature and extent of impact mitigation measures are commensurate with the level of the anticipated impacts. Examples of mitigation measures for potential adverse economic impacts include the following:

- rerouting or shifting the alignment to avoid or minimize business/farm/residential displacement/relocation impacts;

- avoiding or minimizing temporary access disruptions to affected businesses (e.g., by contacting owners to coordinate construction to minimize distress to customers, interference with deliveries);
- establishing a mechanism through which affected businesses/employers can communicate with the District Environmental Engineering Specialist to identify and address construction-related concerns;
- identifying secondary access for businesses, if available and usable;
- scheduling construction for times of low usage for seasonal businesses;
- scheduling construction for before and/or after business hours;
- avoiding the taking or blocking of parking spaces during business hours and preparing a plan for alternative parking in case interference with existing parking cannot be avoided (e.g., acquiring abandoned lots for conversion to temporary parking facilities); and
- incorporating special design measures in the project that promote joint development or multiple use of project right-of-way to help offset tax base impacts.

For each project alternative, the PDE documents the results of analysis and evaluation for the applicable factors above, and the results of coordination with the DT on measures for avoiding, minimizing or reducing identified adverse impacts. This documentation provides the economic impact/mitigation findings for each pertinent area of the economic environment profile (i.e., economic base, development and tax revenues, spending).

The PDE ensures the findings from the economic impact analysis, including mitigation measures, are appropriately reflected in the environmental documentation for the project. See [Chapters 11 “Preparing Environmental Documentation,” 12 “Categorical Exclusion,” 13 “Environmental Assessment/FONSI” and 14 “Environmental Impact Statement/ROD.”](#)

#### **20.3.4 Mitigation and Commitments**

The PDE and DT ensure the project plans accurately reflect the measures for avoiding, minimizing or reducing adverse economic impacts. 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.

The District Environmental Engineering Specialist monitors project construction to ensure that measures to avoid, minimize or reduce adverse social impacts are implemented in accordance with the approved project plans.