CHAPTER 25

SOCIOECONOMIC RESOURCES

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Socioeconomic resources can generally be thought of as manmade resources that provide community services (such as governmental, religious, or educational), places to live, jobs, opportunities for shopping, and other infrastructure or features that make a community livable. This chapter provides information on how these resources should be considered during the course of project development. “Socioeconomic resources” is actually a broad category of topics, including:

- **Land Use Impacts** – Land use often determines the demand for transportation facilities and transportation projects augment land-use possibilities. Thus, land use decisions and transportation investments affect the level of mobility in the region, the viability of each transportation mode in the region, and the overall efficiency of the transportation facilities and services in the region.

- **Social/Community Impacts** – A social or community impact assessment considers the positive and negative effects of a project, policy, or plan on the community. Social/community impacts are influenced by the effect of a project on historic or cultural resources; the availability of open spaces, parks, and recreational facilities; the quality of environmental design; and the availability of affordable housing. A social/community impact analysis should compare changes in the level of community well-being before and after the new development.

- **Environmental Justice** – Environmental justice is concerned with a variety of public policy efforts to ensure that adverse human health or environmental effects of governmental activities such as transportation projects do not fall disproportionately upon minority and/or low-income populations.

- **Relocation Impacts** – A project can be said to have relocation impacts when housing or businesses must be relocated to accommodate it. Steps are taken to assess direct and indirect relocation impacts and to determine how these impacts can be best mitigated.
• **Economic Impacts** – Transportation projects can affect the economic conditions of a community by impacting the community’s development, tax revenues, public expenditures, employment, retail sales, and displacements of and accessibility to businesses.

This chapter summarizes the important key legislation for each topic, explains the methodology that should be used for analyzing these socioeconomic topics, describes the post-National Environmental Policy Act (NEPA) commitments involved, and offers additional resources that might be helpful. The District of Columbia Department of Transportation (DDOT) project manager is responsible for ensuring that these resources are given proper consideration during project development. The project manager is not necessarily required to be the individual conducting the analyses, but he or she should be involved in facilitating the collection of data from other governmental agencies and conducting any community and public outreach that may be required as part of the studies of these resources.

**25.1 Summary of Key Legislation**

Following are lists of key legislation or regulations that establish rules, procedures, or criteria for evaluating socioeconomic resources. The person(s) conducting the socioeconomic analyses for a project should familiarize themselves with these materials to ensure that the project is developed in a manner compliant with their requirements. See Chapter 4 of this manual for a brief summary of the legislation and other documents listed below.

**Land Use Impacts**

• 16 United States Code (USC) 46OL-4 to 46OL-11, Section 6(f) of the Land and Water Conservation Fund Act of 1965

• 42 USC 4231, NEPA

• 42 USC 4601, Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 Public Law 100-17, 101; 23 CFR 710; 49 CFR 24

• Uniform Relocation Act Amendments

• 42 USC 2000d-4; 23 USC 324 (sex) as amended; 42 USC 6101 (age); 29 USC 794 (handicap); 23 CFR 710, Subpart D; 49 CFR 21 Civil Rights Act of 1964

• 40 CFR 1508.14 (human environment)

**Environmental Justice**

Please see Chapter 24, Environmental Justice, for more details.

• Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, February 11, 1994

• Executive Order 12948, Amendment to Executive Order No. 12898, January 30, 1995

• Federal Highway Administration (FHWA) Memorandum from Associate Administrator for Program Development, Nondiscrimination, Environmental

• 49 USC 303, 29 CFR 771, Section 4(f) of the Department of Transportation Act

• 40 Code of Federal Regulation (CFR) 1502.16(c) (environmental consequences)

• 40 CFR 1508.8(b) (indirect effects)

• 40 CFR 1508.8 (effects)

• 40 CFR 1508.14 (human environment)
25.2 General Methodology

The following discussion provides guidance for conducting socioeconomic studies of land use, social/community impacts, environmental justice, relocations, and economic impacts. While each project is unique in its potential to cause impacts to these resources, it is important to understand the basic analytical approach to these studies. The individual conducting the studies should have sufficient experience to judge the appropriate level of detail required to accurately identify any socioeconomic impacts of the proposed project.

25.2.1 Land Use Impacts

Determining the land use impacts of a project is a process of identifying and categorizing current land uses, studying future land use goals established by the local planning agency, and considering how the proposed transportation project will affect the current and future land uses of the area. The proposed project may directly convert land from other uses to transportation use, or it may facilitate conversion of land to other uses by improving access to an area.

Data Collection

Collect the following information, if available for the study area:

- Published documents, including comprehensive land use plans or development plans, as well as zoning map information prepared by each community, county, or economic development agency. Consider any historic context because that will help establish trends in the study area.
• Transportation plan documents prepared by the regional transportation agency, Regional Planning Affiliations (RPA), DDOT, and other local agencies (if available).

• Information from primary data sources, including field reviews and interviews with local government officials and relevant organizations (such as chambers of commerce).

• Interview government officials regarding development policies and plans and determine whether the proposed roadway project is consistent with local plans.

Review these documents to determine whether and how the proposed roadway project is consistent (or inconsistent) with current and future land use plans. Consider these types of questions.

• Does the project traverse a predominantly urban or suburban area?

• What communities does the improvement travel through and what are their goals?

• What is the general land use of the area now and what is planned for the future?

**Determine the Area of Influence for the Project**

After all available data have been collected and reviewed, the area of influence for the project should be identified. This effort includes assessing the following:

• Whether the improvements would cause significant and/or far-reaching changes in existing land use

• Whether the project would facilitate or impede potential growth throughout the travelshed

• Whether land use impacts would be limited to the land converted from its existing use to the transportation facility

The area of influence will be heavily driven by the type of improvement proposed. As an example, new, high-type highways on new alignment often have greater potential to change land use in an area because they provide access that was previously available, opening areas to new development. In such cases, it is important to examine how the local planning agency has incorporated the transportation project into its land use plan and whether the project, as proposed, is consistent with that plan. On the other hand, widening of existing roadways within a densely developed area may require direct conversion of existing residential or business uses to transportation use, but may not otherwise affect land use.

**Determine Land Use Types**

Determine the percentages of land use types that are within the area of influence and what percent would be converted to roadway use by the project. If available for the project, GIS sources should be incorporated and used for data analysis. The categories listed for any given project will depend on the length and type of corridor and on the scope of the improvement. The categories to be noted, if present, are listed below. Note that this list includes land use types, such as agricultural uses, that may be rare within the typical urban area of Washington, D.C.

**Developed**

• Residential (single and multifamily uses)

• Commercial (business facilities, such as retail, wholesale, financial, real estate, restaurants, and other services)
25.2.2 Social/Community Impacts

Determine the Level of Information Needed

The first step in assessing the social and community impacts is determining the scale or emphasis of the data to be collected. For a lengthy corridor, for example, information may need to be collected at the county level and then at the community/city level. For a shorter, urban corridor, information may need to be collected at the community/city level and then at census-block level.

As part of identifying and collecting needed information, if available for the project, data should be collected in a digital format and incorporated into a geographic information system (GIS) for analysis, if GIS is being used for the project.

Identify and Document Neighborhoods

Using available information from the community, such as comprehensive plans or maps, by conducting a windshield survey or by interviewing key community leaders for information, identify and delineate neighborhoods and communities within the project area. This includes identifying community socioeconomic characteristics and physical features (such as housing types, boundaries of a neighborhood, or public and private facilities and services available) for use in assessing community cohesion and access to services. Consider the historical context because it can help aid in identifying trends.

Collect and Document Demographic Information

From the United States Census and District of Columbia Profiles, collect the following demographics, as appropriate and depending upon the scope of the project:

- Population and household characteristics
- Median age
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- Ethnic and racial distribution
- Median years of school completed
- Median household income

Collect demographic forecasts, if available. These may be prepared by regional agencies, counties, or even by communities. (The data are often detailed in Comprehensive Plans.)

Information regarding the elderly, minority groups, low-income populations, disabled persons, and transit-dependent populations may be collected from community leaders, church officials, transit providers, and local social support organizations.

Identify and Document Potentially Affected Facilities

Identify community facilities within the project area of influence. This list may include schools, libraries, religious facilities, health care facilities (such as hospitals and nursing homes), police and fire facilities and associated service areas, and recreation areas. This information may be obtained through mapping, windshield surveys, and coordination with community leaders. Impacts to these facilities can be direct or indirect. Direct impacts to community facilities include displacement or relocation, temporary or permanent access changes, or the creation of a barrier due to the transportation facility. Indirect impacts include altered travel times, bisection of service areas, or other such events.

Collect and Document Information from Residents

Collect information from residents in the project area regarding the proposed project and perceived impacts, as well as potential avoidance, minimization, or mitigation measures. This may be accomplished in various ways—such as by meeting with neighborhood or community groups or gathering input at public meetings for the project.

Analyze Potential Effects

After all available data have been collected and reviewed, determine the project area of influence. Identifying the area of influence includes assessing whether the improvements would cause significant and/or far-reaching changes in existing community and social resources.

Analyze how the proposed project may impact communities and/or specific neighborhoods. Changes caused by the proposed project may be either beneficial or adverse. The analysis should include impacts on cohesion due directly to the proposed improvements (a new facility bisecting a neighborhood, for example). There should also be consideration of potential cohesion impacts as a result of changes in travel patterns and accessibility—for example, is additional traffic now directed through an area where there had previously been a low traffic volume? Consider also traffic safety and overall public safety related to the project.

In analyzing the potential effects, one should consider such questions as the following:

- Would the project alternatives split existing neighborhoods?
- Is there a potential to isolate a portion of a neighborhood or ethnic group?
- Could the project generate new development? What are the potential effects of this (positive and negative)?
- Is there a potential to cause a change in property values (increase or decrease)?
- Would any of the alternatives separate residents from community facilities?
• Does the project change access or travel patterns? If so, does it move traffic into or away from the community/neighborhood?

• Is new access provided where it did not previously exist?

Analyze the impact to groups that are especially benefited or harmed by the proposed projects (for example, effects to the elderly, disabled persons, pedestrians, public transit–dependent individuals, and ethnic groups). Impacts to ethnic groups and low-income persons will be further analyzed in the environmental justice section.

Finally, consider potential enhancements if adverse project impacts are expected to occur.

25.2.3 Environmental Justice

Determine Characteristics of the General Population

Using the most recent United States Census data, determine the demographic and income characteristics of the general population. For projects without a major impact on regional transportation (for example, bridge reconstruction), an acceptable “general population” could be defined by geopolitical boundaries such as a city or county. However, for major projects (those with a sizable influence on regional transportation, such as a new corridor), it is best to define a project-specific general population—that is, the total population that would be affected, positively or negatively, by the project. For example, for commuter routes, one may use the project “travelshed,” the area in which the majority of the facility’s users reside, as the general population. Key data for this analysis include racial characteristics and median household income. These data are best presented in a table or other delineated format, or illustrated by a geographic information system (GIS) graphic.

Determine the Area of Influence for the Project

Impacts within the area of influence for the project can include human health impacts such as noise and air quality, environmental degradation, impacts on community cohesion, or displacement and relocation impacts. The impact area can be determined using the project area or “footprint” of the project (this will determine the displacements and right-of-way acquisition associated with the project). Other relevant areas of influence include the 67-decibel (dB) noise contour (noise impacts) or the project “viewshed” (the area visually impacted by the project). The area of influence is project specific and is based on the impacts associated with each project. For example, in the case of major roadway construction through a residential area, one of the major impacts of concern would likely be noise; thus, using defined noise contours to determine the population that would be subjected to noise levels above the 67-dB contour would be a reasonable “area of influence.”

In limited instances, particularly on large or urban projects, environmental justice (EJ) impacts could affect an entire community rather than just the immediate project area. This would occur when the impacts to a low-income community or minority group adjacent to a project damage the area as a whole (removal of a large enough number of affordable housing units so that there is no longer a sufficient amount of affordable, community-wide housing).

Determine the Characteristics of the Impacted Population

To determine the presence of an EJ population, first determine the characteristics of the impacted population (the population within the area of influence). Using United States Census data available for block groups or other small geographic areas such as quarter-sections, determine the racial/ethnic and income characteristics of the impacted population. Other social program participation, such as
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school lunch programs, can be helpful in determining income characteristics of a defined population. Determine if the incomes in the area fall below the poverty levels established by the United States Department of Health and Human Services (DHHS).

**Compare Impacted Population to General Population**

Compare the characteristics of the general population to those of the impacted population to determine whether there is a disproportionate impact. A table listing the appropriate demographic characteristics of the two populations is the clearest way to compare them. A GIS graphic should also be considered to represent the comparison.

**Determine Whether There Is An EJ Impact**

An impact can be defined as EJ related if the affected population bears a disproportionate share of a project’s negative environmental effects compared to that of the general population. Any disproportionate state will be discussed as part of the environmental consequences of the proposed action. The project team shall investigate and document whether it is reasonable to avoid or minimize the impacts to this population. Design modifications or selection of reasonable alternatives can sometimes minimize or eliminate impacts to an EJ group. A project alternative with an EJ impact would be carried forward only if the social, economic, or environmental effects of the impact-avoiding alternatives render them impractical. In addition, the environmental consequences discussion should include the public involvement process used to coordinate with the affected persons.

An analysis should be completed explaining why avoidance and minimization alternatives are unreasonable on the basis of social, economic (including cost), and environmental effects. Where impacts occur and avoidance is not reasonable, the NEPA document should provide an examination of reasonable mitigation measures. Mitigation measures should include enhancements or offsetting benefits and opportunities that are reasonable in cost and scope to help the project fit more harmoniously into the community. Even if no EJ-impacted population is identified, a brief discussion of EJ should be included in the environmental document. The presence of any minority or low-income persons triggers the investigation, and then the impacts and their magnitude must be assessed.

**Mitigate EJ Impacts**

Where impact-avoiding measures are not reasonable, consider mitigation measures. Working with community agencies and relevant not-for-profit groups can help determine appropriate mitigation strategies. Mitigation measures include enhancements or offsetting benefits and opportunities that are reasonable in cost and scope to help the project fit more harmoniously into the community. (Examples may range from landscaping/green space, sidewalks or other pedestrian accommodations, and lighting features to the creation of community programs or advisory groups.)

**Ensure Public Participation**

Where EJ impacts occur, a proactive and ongoing public involvement program should be implemented to engage the affected public, seek input on potential impact issues, and provide information on project development issues. See Chapter 11 for discussion of appropriate public involvement strategies. Special efforts may need to be made to ensure that minority or low-income populations are aware of the public involvement process and are able to participate. The use of interpreters and bilingual meeting materials, as well as careful selection of meeting locations, may be appropriate, depending on the project conditions.
25.2.4 Relocation Impacts

The methodology discussed in this chapter applies to work to be done during project development for the preparation of project environmental documentation. However, it is also important to coordinate with the Office of Facilities Management, which is responsible for DDOT land acquisition, to seek guidance on the application of DDOT land acquisition policies.

To assess relocation impacts, follow these steps:

- Collect housing data from primary sources. Interview local officials and/or housing organizations. Conduct windshield surveys to generalize local housing stock, unique neighborhood characteristics, and housing availability within the project area.

- Determine the number of households displaced for each alternative under consideration. Do so by overlaying the project design files on county assessor property-line files or aerial photography.

- Determine the characteristics of the households displaced. The assessment of households should include the inhabitants’ characteristics, including race, age, household/family size, income levels, house size (number of bedrooms), and owner-tenant status. These data are available from the United States Census, local economic reports, community resources, visual inspections, and county assessors’ records.

- Determine the availability of comparable replacement housing. Using real estate listings and/or interviews with housing/real estate organizations, assess the amount and type of available replacement housing. The analysis should include price range, size (number of bedrooms), occupancy status (owner/tenant), and location of the replacement housing. This assessment must also consider any special relocation requirements/considerations (such as language barriers or handicap-accessible replacement housing) on the basis of visual assessment of neighborhood and interviews with local representatives and housing officials.

- Estimate the number and characteristics of businesses to be displaced. The assessment should identify available sites for relocations, the likelihood of such a relocation, and the potential impacts to the business or farm. If there are limited displacements, characteristics such as race and income level should not be included for privacy reasons. In addition, one should be careful to pay attention to special concerns and community/neighborhood impacts that require special considerations. Examples of this include racial, cultural, or religious communities.

- Determine the availability of comparable replacement housing for businesses. Conduct the same assessment for businesses as previously discussed for replacement housing when businesses would be displaced by a proposed project.

- Consider indirect impacts. For major projects, this discussion should include, in addition to the direct effects of relocation, any related indirect impacts to schools, taxing districts, or other public entity due to the elimination of households or businesses in one area and their subsequent move to another area. This can be done by calculating actual losses from the tax base (in terms of sales or property taxes) or by estimating the increases or decreases in school enrollment due to relocations to estimate impacts on the local school district.

- Address relocation issues and requirements. Coordinating with local officials, housing organizations, business groups, or other individuals may be helpful to determine the best measures for handling relocation impacts. Such
coordination is strongly encouraged for projects with substantial relocations. Interviews and coordination with the aforementioned groups and individuals should address measures to reduce impacts or to determine the availability of financial and incentive programs or opportunities available to those to be relocated beyond measures provided by the Uniform Act. The project public hearing is also a source of such information, and should always include representatives from the Office of Facilities Management, given their responsibilities in the property-acquisition process.

As noted earlier, the Office of Facilities Management is a potential source of information or guidance for this analysis.

### 25.2.5 Economic Impacts

Assessing the economic impact of proposed projects involves assessing both the physical impacts of the project on businesses, such as a displacement or parking impacts, as well as how the project may affect a business even when it is not physically impacted, such as through changes to access or the removal of drive-by business. In assessing these impacts, the following seven tasks should be considered:

- Characterize labor force variables, employment trends, and economic trends. Collect data on businesses, including the number of employees, type of business, size of business, clientele demographics, and employee demographics. If available, economic trends should be collected and analyzed, because these may help establish the history of the community. Determine the number of major employers within the project area for larger projects that may have regional economic implications. The level of detail available and appropriate for the analysis will vary depending on the magnitude and location of the project.

- If businesses are displaced, estimate the number of people employed at each establishment. In addition, while not required, the use of modeling may be appropriate in some complex projects. (Modeling, when used, would generally apply only to EIS projects.) The necessity for conducting any of these assessments should be determined by the nature of the project impact in the proposed areas. Information about labor force and employment can be obtained through census data or by interviewing state, county, and city officials, and the local community.

- Calculate tax losses/gains to each taxing authority as a result of the project. Determine the amount of land to be removed from the tax rolls for each taxing body and apply their tax rate to an estimated land value to determine an estimated annual loss. Consider the tax consequences of a proposed project, which include removal of lands from the tax rolls (and what that financial loss to specific taxing bodies would be), as well as discussion of impacts resulting from induced growth.

- Determine business impacts due to the proposed improvement. A business may be considered impacted if it is displaced. A business also may be impacted if it loses enough land to render its operation too small to stay in business based on the generated revenue loss (for example, a resulting farm parcel would be too small to cultivate or the loss of a parking area would disrupt operations). Businesses, such as gas stations or convenience stores, which are dependent on drive-by traffic, may also be impacted by the relocation of a roadway away from its location. When evaluating business impacts, consider the number of business displacements, decline in patronage, and lost jobs.

- Establish any indirect impacts to businesses. Indirect impacts include residual effects on businesses that remain
after other businesses have been displaced. Possible effects may include temporary or permanent changes in business access, changes in traffic patterns, changes in property value, and impacts on highway and user safety.

- Consider indirect business impacts if proposed improvement is a bypass (if applicable). If the proposed improvement is a bypass, highway-related businesses located within the project area may be adversely affected, particularly those along the old alignment. Highway-related businesses may include gas stations, motels, or restaurants. The impact may result in decreased revenue or tax base, or loss of jobs. Estimate the number of jobs lost and consider the effects on any existing businesses along a project corridor, or nearby, that are not relocated.

- Develop ways to minimize or reduce economic impacts. Mitigation measures should be developed by the DDOT (or consultant) in an attempt to reduce economic impacts and should address known and foreseeable public and agency concerns. These mitigation measures may be developed in conjunction with local government agencies, if appropriate. Possible mitigation measures may include proposing appropriate access control, developing a public information program, implementing design changes, providing new signage, or suggesting that local zoning be updated.

### 25.3 Post-NEPA Commitments

The DDOT project manager or resident engineer is responsible for complying with commitments made during this phase of project development. The commitments may vary, depending on the project, and cannot be defined in this document. A commitment is typically made in response to an undesired circumstance, and commitments made at this planning stage should be recorded in the environmental document. As the project moves into the design and construction phases, the commitments should be reflected in the planning documents and should continue through construction. For example, an economic impact may result in a commitment to have parking relocation during construction. Additionally, a relocation impact could establish a commitment that would require right-of-way activities, such as appraisals or negotiations. The need and level of commitment is therefore dependant on the project.

### 25.4 Additional Information

#### 25.4.1 Land Use Impacts

- FHWA Technical Advisory (TA) T6640.8A, Section V. This TA provides guidance for uniformity and consistency in format, content, and processing of environmental studies and documents pursuant to NEPA.

- Question 23 of Council of Environmental Quality (CEQ) Q&A Conflicts between Proposed Action and Land Use Plan. This question deals with conflicts between a proposal and the objectives of federal, state, or local land use plans.

- FHWA Community Impact Assessment—A Quick Reference for Transportation. This document explains the process for evaluating the effects of transportation on a community and its quality of life.

#### 25.4.2 Social/Community Impacts

- FHWA Technical Advisory T6640.8A, Section V. This TA provides guidance for uniformity and consistency in format, content, and processing of environmental studies and documents pursuant to NEPA.

- FHWA Environmental Guidebook
  
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- United States Census Bureau http://www.census.gov

25.4.3 Environmental Justice


- United States Environmental Protection Agency (EPA), Guidance for Incorporating Environmental Justice Concerns in EPA’s NEPA Compliance Analyses, April 1998.


25.4.4 Relocation Impacts

- FHWA, Your Rights and Benefits as a Displaced Person under the Federal Relocation Assistance Program, June 2005.


25.4.5 Economic Impacts

- FHWA Technical Advisory T6640.8A, Section V. This TA Addresses social, economic, relocation, and joint development impacts.