

CHAPTER VIII

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CHAPTER IX

Glossary

A-Weighted Decibel (dBA) – A measurement unit that adjusts measured sound pressure levels at different frequencies to conform to the frequency response of the human ear.

Affected Environment – The physical features, land, area or areas to be influenced, affected or created by a transportation improvement under consideration; also includes various social and environmental factors and conditions pertinent to an area.

Categorical Exclusion (CE) – A NEPA classification given to projects or actions that do not have a significant effect on the environment, either individually or cumulatively. Once a categorical exclusion is approved for a project, environmental clearance requirements of the National Environmental Policy Act have been satisfied.

CEQ Regulations – Directives issued by the Federal Council on Environmental Quality (40 CFR 1500-1508) that govern the development and issuance of environmental policy and procedures for federal aid actions by public agencies. The regulations contain definitions, spell out applicability and responsibilities and mandate certain processes and procedures to be followed by state agencies that administer federally funded programs.

Clean Air Act Amendments (CAAA) – Federal legislation passed in 1990 to change both federal and state approaches to regulating air quality; mandating programs to curb acid rain, urban air pollution, and toxic air emissions. The CAAs call for emission reduction measures in air quality nonattainment areas, including the consideration of transportation control measures (TCMs) as part of transportation improvement projects. Projects in nonattainment areas may not increase the number of vehicle miles traveled (VMTs); the number of cars on the roadways must be reduced by encouraging drivers to use mass transit, ridesharing, and carpooling.

Comprehensive Plan – The general, inclusive long-range statement of the future development of a community. The plan is typically a map accompanied by description and supplemented by policy statements that direct future capital improvements in an area.

Constraints – More commonly described as "environmental features." Significant resources, facilities or other features of a study area located in or adjacent to an existing or proposed transportation corridor that serve to restrain, restrict, or prevent the ready implementation of proposed transportation improvements in a given area; may include natural or physical resources, important structures, manner of payment and various administrative requirements which must be met.

Cooperating Agency – As defined in the Council on Environmental Quality Regulations for Implementing the Procedural Provisions of NEPA, "any organization other than a lead agency which has jurisdiction by law or special expertise with respect to any environmental impact involved in...[a] major Federal action significantly affecting the quality of the human environment." CEQ emphasizes that agency cooperation should begin early in the NEPA process.

Cumulative Impact – The sum of all direct, indirect and secondary impacts resulting from a transportation improvement project.

Decibel – Units by which noise levels are measured.

Determination of Effect – A finding made by the Department for federal actions, in consultation with the State Historic Preservation Officer (and the Advisory Council for Historic Preservation), which determines whether a proposed project affects a property included on or eligible for the National Register of Historic Places.

Determination of Eligibility – The process of assembling documentation to render professional evaluation of the historical significance of a property. The Department, in consultation with the State Historic Preservation Officer applies National Register of Historic Places criteria when deciding matters of historical significance.

Direct Effects – Influences or occurrences caused by a given action and occurring at the same time as the action. Changes in noise levels, traffic volumes or visual conditions are some examples of direct effects generated by transportation improvements.

Environmental Classification – An internal determination as to which type of environmental documentation is appropriate for federal actions and 100 percent state funded projects. At the beginning of the Transportation Development Process, projects are systematically grouped into classes based on knowledge of the significance of the environmental effects. For federal actions: **Class I** projects require Environmental Impact Statements, **Class II** projects are Categorical Exclusions, and **Class III** projects require Environmental Assessments.

Environmental Document Reevaluation – An update to an existing document prepared whenever changes occur over time to single or cumulative project conditions that might cause new or more severe environmental impacts or to evaluate a project with respect to new or changed environmental rules, regulations or laws.

Environmental Justice – Efforts to avoid disproportionately high and adverse impacts on minority and low-income populations with respect to human health and the environment. Executive Order 12898 Reference FHWA Actions to address Environmental Justice, FHWA (6644.23).

Environmental Site Assessment (ESA) – An environmental study conducted to assess the potential for contamination of a property or parcel with hazardous substances. The process by which a person or entity seeks to determine if a particular parcel of real property (including improvements) has been impacted by hazardous substances and/or petroleum products.

Equivalent Noise Level (L_{eq}) – The equivalent steady noise level that in a given period contains the same noise energy as time-varying noise (i.e., environmental noise that fluctuates from moment to moment) during the same period.

Expressway – A divided highway for through traffic with full or partial access control and including grade separation at all or most intersections. An expressway can have at-grade signalized intersections at some major crossroads.

Farmland – As defined by the Farmland Protection Policy Act, "farmland" means prime or unique farmlands as defined in Section 1540(c)(1) of the Act or farmland that is determined by the appropriate state or local governmental agency or agencies with concurrence of the Secretary of Agriculture to be farmland of statewide or local importance. Such land may include more than actual cropland (i.e., it may include fallow or abandoned cropland, grazing land and forested land). It does not include land already in or committed to urban development or water storage, thereby excluding developed land with a density of 30 structures per 40-acre area; lands identified as "urbanized area" (UA) on the U.S. Census Bureau Map; lands shown as urban area (i.e., mapped with that "tint overprint") on USGS topographic maps; lands shown as "urban-built-up" on the USDA Important Farmland Maps (available only for a few counties in Missouri); and all assessment criteria on the Farmland Conversion Impact Rating Form.

Farmland Protection Policy Act (FPPA) of 1981 – A federal law requiring federal agencies to consider the adverse effects of federal programs on farmland preservation, consider alternative actions, and as appropriate, consider mitigation that could lessen adverse effects.

Feasibility Study – Refers to systematic evaluations to better assess the desirability or practicality of further developing a proposed action. Such studies are typically performed during the planning stage, or very early in the preliminary development phase when improvement proposals or design concepts need to be more fully investigated.

Federal Action – A highway or transit project proposed for FHWA or FTA funding. It also includes actions such as joint and multiple use permits, other federal permits and approvals, changes in access control, etc., which may or may not involve a commitment of Federal funds.

Field Review – A site visit conducted by the Department to gather or verify data, define scopes of work, perform analyses, and make decisions for specific projects.

Final Design – The development of detailed working drawings, specifications and estimates for transportation projects. Final Design follows the receipt of necessary design and/or environmental approval, and it includes right of way acquisition, utility relocation, and contract advertisement and award.

Freeway – An expressway with free-flow movement and full access control. The only access to a freeway is via merging ramps at interchanges.

Finding of No Significant Impact (FONSI) – A document by a Federal agency briefly presenting the reasons why an action/project will not have a significant effect on the human environment and for which an environment impact statement will not be prepared. It shall include the environmental assessment or a summary of it and shall note any other environmental documents related to it (CFR 1501.7(a)(5)). If the assessment is included, the finding need not repeat any of the discussion in the assessment but may incorporate it by reference (40 CFR - 1508.3).

Grade-Separated Highway – A highway that passes over or under a crossroad, railroad or other crossing that would otherwise necessitate intermittent traffic flow stoppages.

Headwaters – Headwaters means non-tidal rivers, streams, and their lakes and impoundments, including adjacent wetlands, that are part of a surface tributary system to an interstate or navigable water of the U.S. upstream of the point on the river or stream at which the average annual flow is less than five cubic feet per second. The U.S. Corps of Engineers may estimate this point from available data by using the mean annual area precipitation, area drainage basin maps, and the average runoff coefficient, or by similar means. For streams that are dry for long periods of the year, the Corps may establish the point where headwaters begin as that point on the stream where a flow of five cubic feet per second is equaled or exceeded 50 percent of the time. 33 CFR - 330.2(d).

Hectares – A measure of land area equal to 10,000 square meters, or 2.47 acres.

Historical/Architecture Investigations – Studies that result in identification of resources (buildings, structures and sites) constructed over fifty years ago or of recent construction and demonstrably significant based on National Register of Historic Places guidelines, via literature research, photo documentation, analysis, and interpretation.

Human Environment – Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the

environmental impact statement will discuss all of these effects on the human environment. 40 CFR - 1508.14.

Identification of Alternatives – The Department’s engineering and environmental evaluations, in which the Department identifies and chooses an initial set of study alternatives that address the stated program objectives and the project need, and which are sensitive to the resources and land uses of a study area. The process involves a wide variety of possible options, assessing the merits and drawbacks, and choosing those that should be carried forward. Alternatives to be studied normally include the No-Build or no-action alternative, an upgrading of the existing roadway alternative, new transportation routes and locations, transportation systems management strategies, multi-modal alternatives if warranted, and any combination of the above.

Impacts – Positive or negative effects upon the natural or human environment resulting from transportation projects.

Indirect Effects – Impacts that can be expected to result from a given action that occurs later in time or farther removed in distance; for example, induced changes to land use patterns, population density or growth rate.

Intersection – The point where two or more roads come together at the same grade, and where a vehicle can turn from one road onto another.

Interested Community – A compilation of the names and addresses of persons or groups affected by or interested in a specific transportation project. This information is gathered and maintained by Team during the course of the study.

Jurisdictional Determination (JD) – A site survey or document review performed by the U.S. Army Corps of Engineers to officially determine whether or not a given parcel of land is subject to regulation as waters of the United States, and if so, the extent of the area. This is generally applied to wetlands, but may also be used to determine jurisdictional issues with respect to headwater streams, ditches and similar areas.

Keeper of the National Register (Keeper) – The official responsible for the administration of the National Register within the National Park Service. One duty of the Keeper is to provide a formal determination of eligibility on cultural resources submitted when there is disagreement between the federal agency and the State Historic Preservation Officer.

Kilometer – A measure of distance equal to 1,000 meters, or 0.61 miles.

Level-of-Service – A qualitative measure of traffic flow and driver satisfaction, with values ranging from A (free flow) to F (over-saturation).

Logical Termini – Connecting points with known features (land uses, economic areas, population concentrations, cross route locations, etc.) at either end of a proposed transportation route that enhance good planning and which serve to make the route usable. Logical termini are considered rational end points for a transportation improvement.

Mapping – A plan surface with graphic or photographic representation of land or water depicting the study area for a project. Existing alignments, alternatives, engineering design features, and environmental constraints are plotted on various types of mapping. Photogrammetric (aerial) mapping assists in resource identification and studies. Topographic (base) mapping provides a foundation in alignment layout. Property tax maps, and traffic data maps also are consulted in the transportation development process. The type and scale of mapping are selected to fit the terrain and land use intensity of the study area as well as the level of detail in the proposed design.

Mitigation Measures – Specific design commitments made during the environmental evaluation and study process that serve to moderate or lessen impacts deriving from the proposed action. These measures may include planning and development commitments, environmental measures, right of way improvements, and agreements with resource or other agencies to affect construction or post-construction action. Mitigation includes: Reducing and eliminating impacts; avoiding the impact altogether by not taking a certain action or parts of an action; minimizing impacts by limiting the degree or magnitude of the action and its implementation; rectifying the impact by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and compensating for the impact by replacing or providing substitute resources or environments.

National Environmental Policy Act (NEPA) – Passed in 1969, the federal legislation requiring agencies of the federal government to document the environmental impact of transportation projects. The NEPA process is enforced by regulations of the Council on Environmental Quality (CEQ).

National Pollutant Discharge Elimination System (NPDES) Permit – Mandated by Section 401 of the Clean Water Act for the discharge of pollutants from a point source into surface waters (including wetlands) for disposal purposes; intended to regulate the amount of chemicals, heavy metals, and biological wastes discharged in wastewater. Currently applies to stormwater discharges from construction projects disturbing five acres or more.

National Register of Historic Places – Criteria for Evaluation – The criteria used by the Missouri Historic Preservation Office and the National Park Service to evaluate the eligibility of properties for listing on the National Register of Historic Places. The criteria are:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

No-Build Alternative or "No-Action Alternative" – Option of maintaining the status quo by not building transportation improvements. Usually results in eventual deterioration of existing transportation facilities. Serves as a baseline for comparison of "Build" Alternatives.

Noise Abatement Criteria – Criteria used for determining whether noise impacts would occur with the project; employ land use and activity categories to assess noise impacts.

Non-Attainment Areas – Counties that do not meet national ambient air quality standards; ranked by the severity of their problem as marginal, moderate, serious, severe or extreme. In accordance with the Clean Air Act Amendments of 1990, these areas must take specific emission reduction measures.

Notice of Intent – Announcement in the Federal Register advising interested parties that an Environmental Impact Statement will be prepared and circulated for a given project.

Open House – An informal, unstructured Public Meeting or Hearing during which information stations with exhibits convey important project information and Department and consultant personnel are available to answer the public's questions.

Palustrine – Pertaining to non-tidal wetland areas dominated by trees, shrubs, persistent emergent vegetation, emergent vegetation, and all wetlands that occur in tidal areas where salinity from ocean-derived salts is below 0.5%.

Passing Sight Distance – The length of roadway needed to safely complete normal passing maneuvers.

Plans – Technical drawings that show the location, character and dimensions of prescribed project work, including layouts, profiles, cross-sections and other details.

Pre-Construction Notification (PCN) – A document, generally a completed 404 Application, which must be submitted to the U.S. Army Corps of Engineers prior to commencing an activity authorized by a Nationwide Permit.

Public Hearing – A hearing designed to afford the public the fullest opportunity to express support of, opposition to, or comment on a transportation project. Documentation is required.

Public Involvement – Coordination events and informational materials geared toward public participation in the study process.

Public Meeting – An announced meeting conducted by transportation officials designed to facilitate public participation in the decision-making process and to assist the public in gaining an informed view of a proposed project during the study process.

Record of Decision (ROD) – A document prepared by the Division office of the Federal Highway Administration that presents the basis for selecting and approving a specific transportation proposal that has been evaluated through the various environmental and engineering studies. Typically, the ROD identifies the alternative selected in the Final EIS, the alternatives considered, measures to minimize harm, monitoring or enforcement programs and an itemized list of commitments and mitigation measures.

Right of Way – A strip of land occupied or intended to be occupied by certain transportation and public use facilities, such as roadways, railroads and utility lines. The land is either owned outright or controlled by easement by the public agency.

Scope of Work – A detailed, written listing of tasks prepared in advance of engineering and environmental work to define requirements of studies. A scope of work is provided to prospective consultant firms prior to the initiation of studies to aid in preparing estimates of working hours, schedules, and costs required to prepare, complete, and deliver the work described.

Secondary Effects – A general term to define impacts which are caused by a specific action and which take place later in time or farther removed in distance but are still reasonably foreseeable. Secondary effects can be indeterminate, may not be easily recognized and can be difficult to identify and evaluate.

Section 106 Procedures – Procedures based on Section 106 of the National Historic Preservation Act of 1966 that governs the identification, evaluation, and protection of historical and archaeological resources affected by state and federal transportation projects. Principal areas identified include required evaluations to determine the presence or absence of sites, the

eligibility based on National Register of Historic Places criteria and the significance of the effect of a proposed project upon such a site.

Section 401 Water Quality Certification – Required by Section 401 of the Federal Clean Water Act for projects involving the discharge of materials into surface waters, including wetlands. The applicant must demonstrate that activities will comply with water quality standards and other provisions of federal and state law and regulations regarding conventional and non-conventional pollutants, new source performance standards and toxic pollutants.

Section 404 Alternatives Analysis – Examines practical alternatives to the possible discharge of dredged or fill material into certain aquatic ecosystems, such as wetlands, mud flats, vegetated shallows or other special aquatic systems. "Practical" means "available and capable of being done after taking into consideration cost, existing technology and logistics in light of overall project purposes." Criteria guiding such an analysis are derived from the previous of Section 404(b)(1) of the 1972 Federal Clean Water Act as amended in 1977. The analysis is performed during the environmental studies of the Transportation Development Process and is required before the issuance of a permit by the Corps of Engineers for the discharge of dredged or fill materials.

Section 404 Permit – A Corps of Engineers (COE) permit to authorize the discharge of dredged or fill material into waters of the U.S. pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). The types of permits that may be issued are:

Individual Permit - COE authorization that is issued following a case-by-case evaluation of a specific project involving the proposed discharge(s) in accordance with the procedures of 33 CFR Parts 323 and 325 and a determination that the proposed discharge is in the public interest pursuant to 33 CFR Part 320. 33 CFR - 323.2(g).

General Permit - COE authorization that is issued on a nationwide or regional basis for a category or categories of activities when:

- 1) Those activities are substantially similar in nature and cause only minimal individual and cumulative environmental impacts;
- 2) The general permit would result in avoiding unnecessary duplication of regulatory control exercised by another Federal, state, or local agency provided it has been determined that the environmental consequences of the action are individually and cumulatively minimal. (See 33 CFR - 325.2(e) and 33 CFR Part 330). 33 CFR 325.2(f) and 323.2(h).

Regional Permit - Regional permits are a type of general permit. They may be issued by a division or district engineer after compliance with the other procedures of the Section 404 permit regulations. If the public interest so requires, the issuing authority may condition the regional permit to require a case-by-case reporting and acknowledgment system. However, no separate applications or other authorization documents will be required. 33 CFR 325.2(e)(2) and 325.5(c)(1).

Nationwide Permit - Nationwide permits are a type of general permit and represent COE authorizations that have been issued by the regulation (33 CFR Part 330) for certain specified activities nationwide. If certain conditions are met, the specified activities can take place without the need for an individual or regional permit. 33 CFR - 325.2(e)(1).

Section 4(f) Determination – Administrative action by which FHWA confirms that, on the basis of extensive studies and analysis, there are no "prudent and feasible" alternatives to the taking of land from resources protected under Section 4(f) of the U.S. Department of Transportation Act, as amended (49 USC 303). These resources include: parks or recreation areas that are

publicly owned or open to the public, publicly owned wildlife or waterfowl refuges, or any significant historic sites.

Section 6(f) – A provision in the Federal Land and Water Conservation Fund Act that protects public recreational properties developed or enhanced using federal funding supplied to states or municipalities under the act by requiring replacement of lands converted to non-recreational uses. Proposed transportation projects that affect such lands require a study and an analysis of alternatives to serve as the basis for a Section 6(f) finding by the U.S. Department of the Interior. Specific state legislation for any proposed land transfer is also required in order to implement a Section 6(f) action. Generally requires replacement of 6(f) land taken for a project.

Sensitive Receptor – An area of frequent human use (i.e., residential property, church, school, library, hospital, park, hotel, motel, etc.) where noise impacts could have adverse effects.

Sensitive Species – Plant or animal species which are (1) Federal listed or proposed threatened or endangered species; (2) bird species protected under the Migratory Bird Treaty Act; (3) species protected under State endangered species laws and regulations, plant protection laws and regulations, Fish and Game codes, or species of special concern listings and policies, or (4) species recognized by national, state, or local environmental organizations (e.g., The Nature Conservancy).

Significant Impacts – Any number of social, environmental, or economic effects or influences that may result from the implementation of a transportation improvement; classified as direct, secondary, or cumulative which significantly affect the human environment. The FHWA mandates environmental clearance documents based upon the significance of impacts. In most cases, Environmental Impact Statement projects involve significant impacts. Both context and intensity as described in 40 CFR 1508.27 are important when determining significance.

Smart Growth – Managing development and change to maximize positive benefits, minimize negative impacts, and maintain a strong community quality of life.

Sole Source Aquifer – As defined by the Federal Safe Drinking Water Act, a groundwater source that represents the principle source of a water supply for a community or region that, if contaminated, would create a significant hazard to public health.

Special Aquatic Sites – Those sites identified in 40 CFR 230 Subpart E (i.e., sanctuaries and refuges, wetlands, mud flats, vegetated shallows, coral reefs, and riffle and pool complexes). They are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. 40 CFR - 230.3(q-1).

Sprawl – Low-density segregated land use, automobile-dependent development on the fringe of urban areas. Expanding suburbs surrounding an aging and sometime deteriorating urban core. Sprawl often consumes agricultural lands, forest and other open spaces in regions surrounding metropolitan areas.

Summary of Environmental Commitments – Design commitments made during the environmental evaluation and study process to moderate or lessen impacts from the proposed action. These measures may include planning and development commitments, environmental measures, right of way improvements and agreements with resource or other agencies to effect construction or post construction action.

Waters of the U.S. – Water bodies subject to U.S. Army Corps of Engineers jurisdiction. They include all interstate and intrastate waters such as lakes, streams (including intermittent streams) and wetlands.

Well Head Protection Area – The surface and subsurface area surrounding a water well, well field, spring or infiltration gallery supplying a public water system, through which contaminants are reasonably likely to move toward and reach the water well or well field.

Wetlands – Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. 33 CFR - 328.3(b); 40 CFR - 230.3 (t).

Wetland Delineation – Provides both written and illustrated data to define the boundaries of those topographic features within a study area and which meet the federal definition of "wetland." as contained in 33 CFR - 328.3(b). A delineation report represents the first step in the overall wetland study process, which evaluates the importance of a wetland and ultimately assesses the effects of a project on a wetland. Currently wetlands are delineated in accordance with the 1987 U.S. Army Corps of Engineers Wetland Delineation Manual. The report may be included as a part of an Ecological Survey Report for specific purpose of wetland delineation.