CHAPTER 3

PROJECT DEVELOPMENT

CONTENT

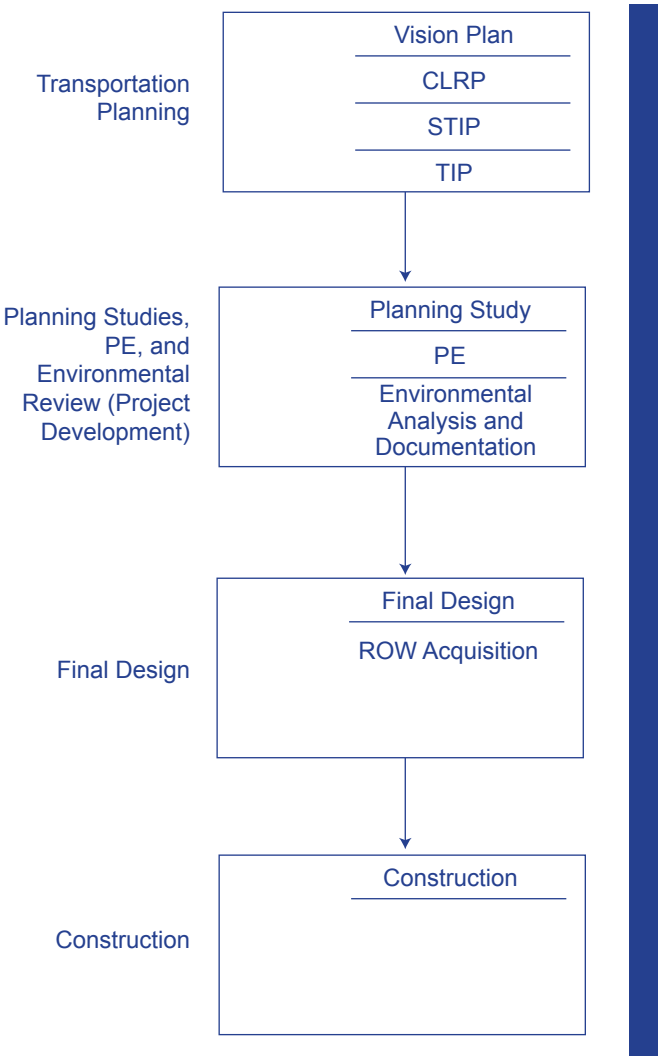
CHAPTER 3

PROJECT DEVELOPMENT PROCESS

This chapter describes the different phases of project development and its relationship with environmental review. Project development involves several distinct phases, with differing purposes and levels of detail. Various departments of transportation have their own terminology for how they describe these different phases. DDOT describes the project development process as four major phases:

1. Planning
2. Project Planning, Preliminary Engineering, and Environmental Review (Project Development)
3. Final Design
4. Construction

The first phase of project development is Transportation Planning. This phase involves a higher level of planning, which includes statewide planning (citywide planning for DDOT) as well as metropolitan and regional planning. During this phase, the Constrained Long Range Plan (CLRP), State Transportation Improvement Program



(STIP), and Transportation Improvement Program (TIP) are developed. During this phase the need for a project is determined. This determination may come as a result of several different types of input: engineering studies, infrastructure condition analyses, public input, or legislative input, among others.

The next phase of project development is the subject of this manual. This phase involves project planning studies, preliminary engineering, or conceptual design, as well as environmental review and documentation. This phase is sometimes also called the "Project Development" phase. The Project Development and Environment (PDE) Division is responsible for project development. During this phase, alternatives with the potential to solve the transportation problem are investigated, including their engineering requirements and environmental impacts. This phase typically involves public involvement, agency coordination, preliminary engineering plan development, and the preparation of environmental studies and documents.

The third phase of project development is final design. During this period, plan documents are developed, including engineering drawings and special provisions needed to guide construction.

The fourth phase is the construction phase. While the term "construction" may seem obvious, it is important to consider that this phase may require follow-through on commitments that have been made to agencies and the public during earlier phases of project development.

In examining how project development occurs, from planning through to the design phase and eventually to construction, one can see that more detail is added through each consecutive step and that the field of vision narrows until the focus is on a single element or improvement concept. The Transportation Planning process identifies that there is a need for an improvement. The Project Planning process focuses upon identifying what it is that should be built (if planning studies end in a recommendation in favor of a build alternative). Design focuses on how something should be built. Construction, of course, builds the design, focusing on how the pieces fit together in the field.

The PDE Division is responsible for all Transportation Planning and Project Planning activities (except in special cases such as project planning for transit, which is performed by the Progressive Transportation Systems Administration (PTSA), previously known as Mass Transit Administration (MTA)). The PDE Division is responsible for project development. The Infrastructure Project Management Administration (IPMA) is responsible for the design and construction of projects. The types of projects DDOT completes often involve more than straightforward rehabilitation and improvements within the existing right-of-way, including the following:

- Roadway widening
- Safety improvements
- Capacity improvements
- Intersection improvements
- Interchange studies
- Projects that could result in environmental impacts or changes in access and mobility
- Routes on new alignments
- Reconstruction requiring additional right-of-way and potential environmental impacts

This chapter will help to set the stage for the project planning process. The discussions contained here will provide background for what happens before the project planning begins, when a planning study is needed, provide the general context for a project planning process, and explain the relationship between the decisions made during the project planning process and the implementation of those decisions during design and construction.

3.1 Transportation Planning

The PDE Division within DDOT is responsible for the Transportation Planning process. It is during this phase that a project begins to take shape and is officially recognized as a transportation problem that needs to be addressed. In essence, the Transportation Planning process provides a guide for accomplishing a project's transportation goals and objectives in the context of the overall transportation system and program.

The key distinctions between Transportation Planning and Project Planning phases include the following.

- Transportation Planning is the precursor to project planning studies.
- During Transportation Planning, the proposed action is specified at a conceptual level, but does not specify the range of alternatives to be studied.
- Through the Transportation Planning process CLRP, TIP, STIP, and the Capital Improvement Plan (CIP) are developed and input are provided to the metropolitan planning organization (MPO). Through this process, the PDE Division identifies the system deficiencies and public and agency input that drive the creation of a project and defines the basic project needed to address the problem. Please note that the MPO for the Washington, D.C. region is Metropolitan Washington Council of Governments (Wash COG or MWCOG).
- The Transportation Planning process is much broader in scope than the planning process because it looks at the system as a whole, rather than a single link in the system.
- No engineering design is completed during Transportation Planning, nor does Transportation Planning establish the specific design requirements for an improvement, such as cross-section needs or alignments. By comparison, preliminary design is an integral element of the project development process, because this information is required to define needed improvements and their footprint (impact on the ground) to support associated National Environmental Policy Act of 1969 (NEPA) analyses and secure Federal Highway Administration (FHWA) approval in cases where the project is using federal funds.

3.1.1 The Relationship Between Transportation Planning and the Purpose and Need

Much of the work that goes into the Transportation Planning process to identify the need for an improvement on a system wide scale is the same information that forms the basis of the purpose and need for an individual project.

"Purpose and need" in this discussion is not meant simply to refer to the statement developed during the NEPA process. Indeed, even for projects where there is not a companion NEPA document or it is being processed under local guidelines, it is important to develop a purpose and need, or set of goals and criteria for the proposed action. This process will help establish the criteria by which alternatives are developed and evaluated.

Information generated during the Transportation Planning process should be augmented as appropriate and used to help define the purpose and need. Additional analyses that may be required to generate supporting information needed to better understand the transportation problem and establish the measures for alternatives evaluation include travel and traffic forecasting, studies of infrastructure deficiencies, sufficiency ratings for pavement and structures, public and agency input, and planning documents that would demonstrate consistency with regional transportation planning goals.

Projects are included in the Transportation Planning process because they have a demonstrated need, such as crash history

or capacity problems, while others may have been identified through legislative support, economic conditions, or a desire for consistency with land use planning goals.

3.2 Project Planning, Preliminary Engineering, and Environmental Review (Project Development)

As described earlier, this phase is also called the "Project Development" phase by many organizations. This phase of the process includes project planning, planning studies, preliminary engineering, preliminary design, alternatives analysis, and environmental review, documentation, and approval.

23 CFR 636.103 defines the term "Preliminary Design" as follows: "Preliminary design defines the general project location and design concepts. It includes, but is not limited to, preliminary engineering and other activities and analyses, such as environmental assessments, topographic surveys, metes and bounds surveys, geotechnical investigations, hydrologic analysis, hydraulic analysis, utility engineering, traffic studies, financial plans, revenue estimates, hazardous materials assessments, general estimates of the types and quantities of materials, and other work needed to establish parameters for the final design. Prior to completion of the NEPA review process, any such preliminary engineering and other activities and analyses must not materially affect the objective consideration of alternatives in the NEPA review process."

3.2.1 Overview of the Project Planning Process

Chapter 1 of this manual provides a more detailed discussion of DDOT's environmental policies and NEPA implementation. Later chapters in the manual explore individual resource studies and their methods and documentation in depth. Before considering the detail of a specific resource, it is helpful to understand the basic definition and purpose of the Project Planning process.

In many ways, Project Planning may be the most crucial phase of a project. This phase focuses on defining the problem as a means to identify a range of potential transportation solutions. This stage of the study process offers the greatest potential for avoiding environmental impacts and for controlling project construction costs.

The solutions developed during this phase must meet transportation engineering design principles, be economically feasible, and be publicly and politically acceptable. Specifically, the solutions must provide decisions about a type of improvement (such as access control, basic number of lanes, level of service, and design characteristics) and an approximation of where the project should be located.

The project planning process considers a broad range of alternatives and allows a serious examination of the means to address a transportation problem. The focus of a planning study is determining the best solution to a problem, whereas the focus of a design study involves determining the best way to implement that solution. A planning study asks, "What is the best solution to the problem?" A design study, on the other hand, asks a different question, "What is the best way to implement the solution?"

Not all projects are subject to planning studies. Certain improvements do not require detailed studies or investigation of alternatives. These improvements are defined adequately at the programming phase and generally do not require a planning study. They include the following.

- Resurfacing
- Reconstruction within the existing cross-section (with little or no new right-of-way)
- Bridge repair
- Signing

This list is not exclusive, and even projects falling into this list should be evaluated for their potential to require more detailed analyses. The projects that fall in the categories listed above typically go to IPMA directly for design and construction from the Transportation Planning phase after environmental review. Such projects do not require PDE to conduct planning studies.

Because each project will have its own set of goals that it must accomplish to result in successful completion, so must the planning process have its set of goals for the study to be successful and ready for design development.

Once there is a clear definition of the problem, the study should provide an examination of a range of alternatives. This examination should withstand the rigors of the NEPA process, if applicable, as well as the application of good engineering principles.

This examination of alternatives should involve applying a series of filters to proposed solutions (alternatives) to test and eliminate those that should not be carried forward for additional analysis. The categories that should be used for testing are listed and described below.

- Technical: The first test evaluates whether the proposed alternative meets technical (engineering) guidelines. Is it possible to accomplish the goal? Does the alternative meet safety demands? Does it create new or additional problems for adjacent areas (downstream congestion, for example)?
- Environmental: The potential alternatives that pass the first test are evaluated for their potential environmental impacts. The key to this analysis is the application of the sequencing process for the resources to which it applies. More generally, testing all resources for sequencing provides a good test. Does the alternative cause potentially significant impacts to such sensitive resources as wetlands, park and recreational lands, historic resources, or homes and businesses? Do other alternatives exist that would accomplish the project goals with or without less impact?
- Financial: The third test is of fiscal reasonableness. Do the alternatives accomplish the goals and avoid or minimize impact to resources, but at an unreasonable financial cost? Are the alternatives well outside the programmed budget for implementation?
- Public and Political: A planning study should consider public and political input in the process. The input and preferences of public and elected officials are a useful tool in decision making, particularly when deciding among alternatives that are otherwise similar. As a public agency, careful consideration should be given before implementing alternatives that the majority of the public opposes.

In addition to the criteria noted above, the study should result in a legally defensible solution and should not require significant reexamination of the study during the subsequent design phase.

One of the threads running throughout this manual is the concept of a "proper level of detail." Many of the actions DDOT undertakes are developed in stages rather than all at once. A planning study is an example of one of these stages. A planning study takes a conceptual system-level improvement and defines it as a project with logical termini, allowing for an intermediate stage of development involving the following:

- Allows work to be done at an appropriate level of detail for the decision at hand
- Minimizes the higher costs that design studies could require, such as a higher degree of geometric and data accuracy, although that accuracy does not necessarily translate to better decision making
- Allows the project to be viewed on a higher level as part of the whole transportation network

For Wash COG to complete its long-range planning and for DDOT to develop the TIP and CIP, both organizations use regional or citywide data and trends to identify locations where the investment of transportation funds is needed. When a project moves from the Transportation Planning phase to the Project Planning phase, the level of detail used in the analysis increases. The planning study results in the generation of sufficient engineering detail to facilitate the identification of the best performing alternative while balancing the engineering needs and their environmental impacts.

3.2.2 Responsibilities During the Project Planning Phase

The project manager is ultimately responsible for the development of the project. This includes ensuring that coordination with appropriate external agencies is completed, as well as coordination with other staff within DDOT. The project manager is responsible for obtaining any permits or approvals that are required during the project planning phase, whether issued by federal or District of Columbia agencies or DDOT itself. It must be noted that certain permits are not issued until the final design is completed; however, it is necessary to coordinate with the agencies that issue those permits during the project planning phase to ensure that the appropriate permit requirements are met and the relevant agency is aware of the projects and its scope.

The Project Development and Environment (PDE) Division is available to provide support for specific environmental studies and reviews. The project manager should actively engage staff from PDE Division early in project development. Regular coordination with PDE environmental staff throughout the project will help to avoid undesirable surprises that may arise later in project development. In particular, if changes in the proposed scope of a project arise, it is advisable to discuss the proposed changes with PDE staff to determine if the changes affect the studies or approvals needed for the project.

All planning studies shall include the DDOT Environmental Form I, and upon its completion, Form II.

3.2.3 The Relationship Between Engineering and Environmental Studies

The relationship between engineering and environmental studies during project planning is dynamic and iterative. It is during the planning phase that environmental issues are identified, opportunities to avoid resource impacts are recognized, mitigation concepts are developed where avoidance is not possible, and necessary coordination with agencies with jurisdiction over resources is conducted. During this phase, engineering alternatives are identified and developed based on their potential to address project needs that evolve over the course of the study as decisions are made about the number of lanes, location of alignments, configuration of intersections, and similar issues.

Engineering and environmental studies are not related in a linear manner; given the specifics of a project, they are intertwined, depending on factors such as the following:

- The engineering complexity of the project or proposed action
- The presence of resources that may require sequencing (avoidance, minimization, and mitigation)
- The need for a "master plan," from which smaller projects may be broken out for development (tiering, for example)
- The expected level of controversy that the project would generate and the need to be responsive to public and agency input
- Knowledge of whether the project would result in a potential for significant environmental impacts

The relationship between engineering and environmental studies should be explored through a tight, iterative process during project development. The purpose of the planning process is, in the most general terms, to develop a recommended solution for a transportation need. Knowing the environmental constraints and opportunities on a project aids in better decision making on a project in terms of the quality of the solution and in easier processing of the project in terms of practical ability to acquire the necessary approvals to execute the project. Learning about these constraints and opportunities requires coordination among the different DDOT administrations.

The environmental studies may be conducted under the auspices of NEPA, under District of Columbia Environmental Policy Act (DCEPA), or under more general practices of good planning. In some cases, where there is potential that federal funds may be requested in the future, the project should be developed giving consideration to how future application of NEPA would impact decision making.

3.2.4 Implementing the Planning Process

Project Initiation

This manual is structured around chapters that provide details for implementing the various elements of the planning process. These chapters cover elements ranging from the process for completing an Environmental Impact Statement (EIS) or Environmental Assessment (EA), the application of context-sensitive solutions to projects, and conducting public involvement to studying particular resources and applying all of the above requirements to proposed actions that fall into the major project category.

The process for all projects, however, begins with the steps shown in Figure 3-1, Project Initiation Process. Projects are first included in the DDOT program, and a project manager is identified for them. The process concludes with the finalization of the Environmental Evaluation Form and obligating funding for the project.

Step 1

The need for the project is identified, and the project is included in the multiyear program. A project manager is assigned.

Step 2

DDOT administration and PDE staffs meet to review the project and potential requirements. The project manager has to be involved in this meeting.

Step 3

Based on input received during the project review meeting, the PDE staff recommends the level of environmental documentation and the resource studies that will be required for the project.

Step 4

The PDE staff provides recommendations on the Section 106 and Section 4(f) requirements for coordination with the District of Columbia Historic Preservation Officer (DCHPO) and/or the National Park Service (NPS), permits under the Clean Water Act (CWA), and any coordination specific to them.

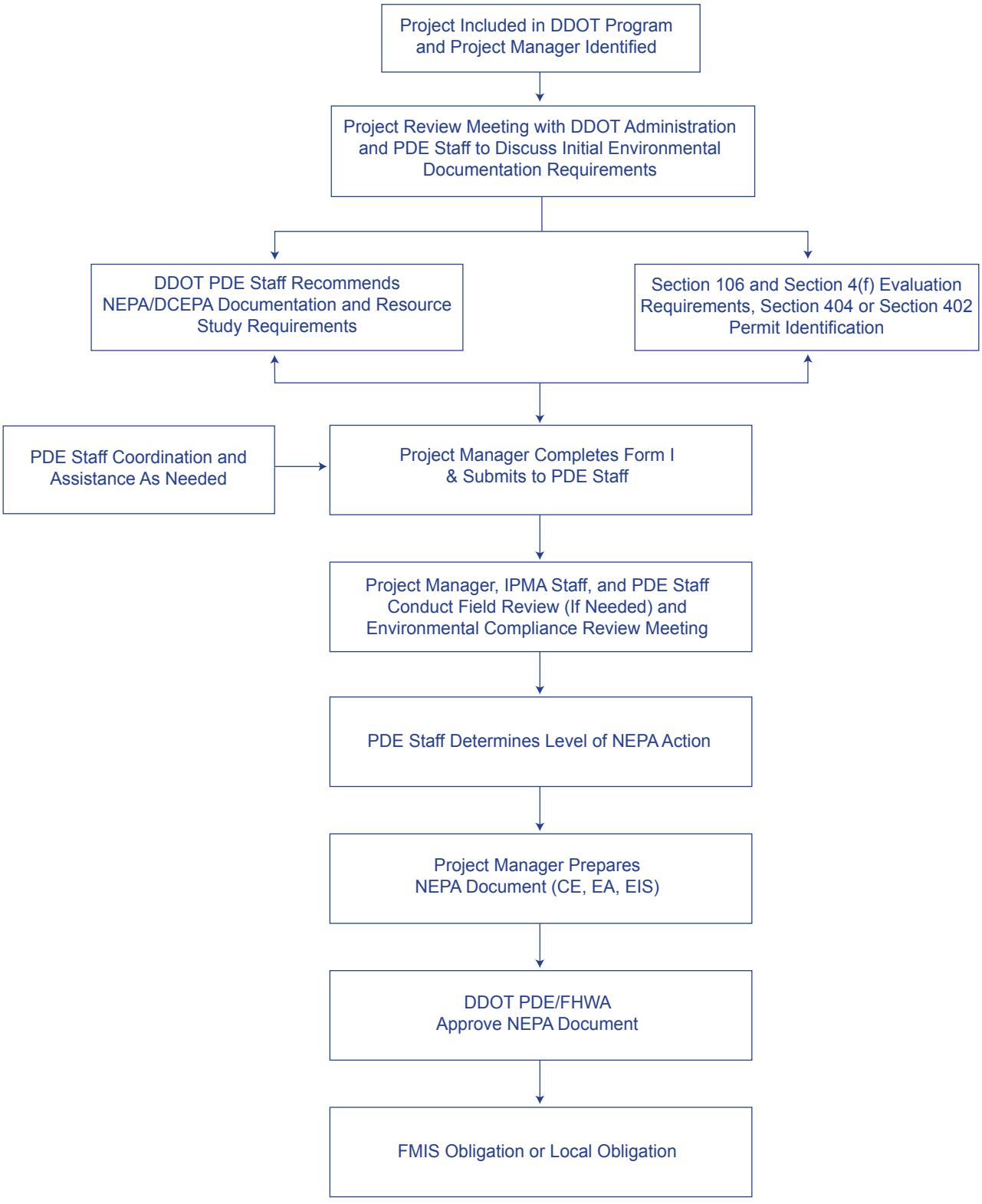
Step 5

At this point, the project manager is responsible for completing DDOT Environmental Form I (contained in Appendix A). The form should be submitted to the PDE staff for review. The PDE staff provides comments and guidance or assistance, as needed, on the next steps, based on the information provided in Form I.

Step 6

The project manager, IPMA/PPSA/TOA/PTSA staff, and PDE staff conduct a joint field review and hold an environmental compliance review meeting. If, based on the

Figure 3-1 Project Initiation Process



findings of the field review and the Form I review, there are no further changes to the scope of the project, the NEPA recommendations, or the coordination requirements of the project, the PDE staff completes Form II, approves the form, and returns it to the project manager. At this point, if the project is federally funded, funding is obligated in the Financial Management Information System (FMIS). If locally funded, the local project funding is approved. Whether federal or local, after the obligation of funding, the subsequent phases of project development can begin.

Project Development and Environmental Review

Once federal or local funds have been allocated and the project is initiated, intensive field surveys and data collection may begin. This includes the development of functional-level engineering studies, study reports and documentation, and continuing public involvement. It is important to note that public involvement for a project begins during the development of the TIP and continues through construction. However, there are specific requirements for public involvement activities during planning. These requirements are covered in more detail in Chapter 11, Public Involvement.

Field studies for individual resources identified in the DDOT Environmental Forms will be completed during this phase of project development. Any such studies that have been identified should be conducted by qualified staff (a professional wetland scientist for wetland delineations, for example).

Subsequent chapters of this manual provide guidance on the procedures for identifying and studying resource concerns such as wetlands, threatened and endangered species, water resources and water quality, and hazardous waste. Based on the information provided in DDOT Environmental Form I, the PDE staff will complete DDOT Environmental Form II and inform the project manager regarding the necessary environmental documentation and approvals needed for a project that includes NEPA action or DCEPA action, Section 106 evaluations, Section 4(f) evaluation, or other required documentation. If the project will be using federal funding, it will be processed as an EIS, EA, or Categorical Exclusion (CE). (DDOT Environmental Form II is contained in Appendix B.) The steps involved in these processes are depicted in Figure 3-2a-c, NEPA Process Summary. Note that these processes are interrelated, and if at any point it is concluded that a project may have the potential for greater impacts to resources than initially anticipated, the project may be reclassified and subjected to a higher level of study and public review. If the project is using local funds, then DCEPA will apply and the project will be processed as an exemption, EISF, or an EIS.

Additional details of this process are provided in the following chapters of this manual.

- Chapter 8, The Environmental Impact Statement and Record of Decision
- Chapter 9, The Environmental Assessment and Finding of No Significant Impact
- Chapter 10, The Categorical Exclusion

During the course of project development, it is natural for the scope of a project to change. When these changes are significant, a reevaluation of potential impacts to resources is usually required. More often, however, the changes to a project are minor in nature and may not immediately prompt a project manager to reconsider potential resource impacts.

Form II should be reevaluated when a project reaches the 65-percent design stage. At this stage, most of the critical aspects of the design are known, and major engineering changes to the scope of the project have been identified. This provides an opportunity to discover issues that may require further study or documentation at a time when they can still

Figure 3-2a NEPA Process Summary

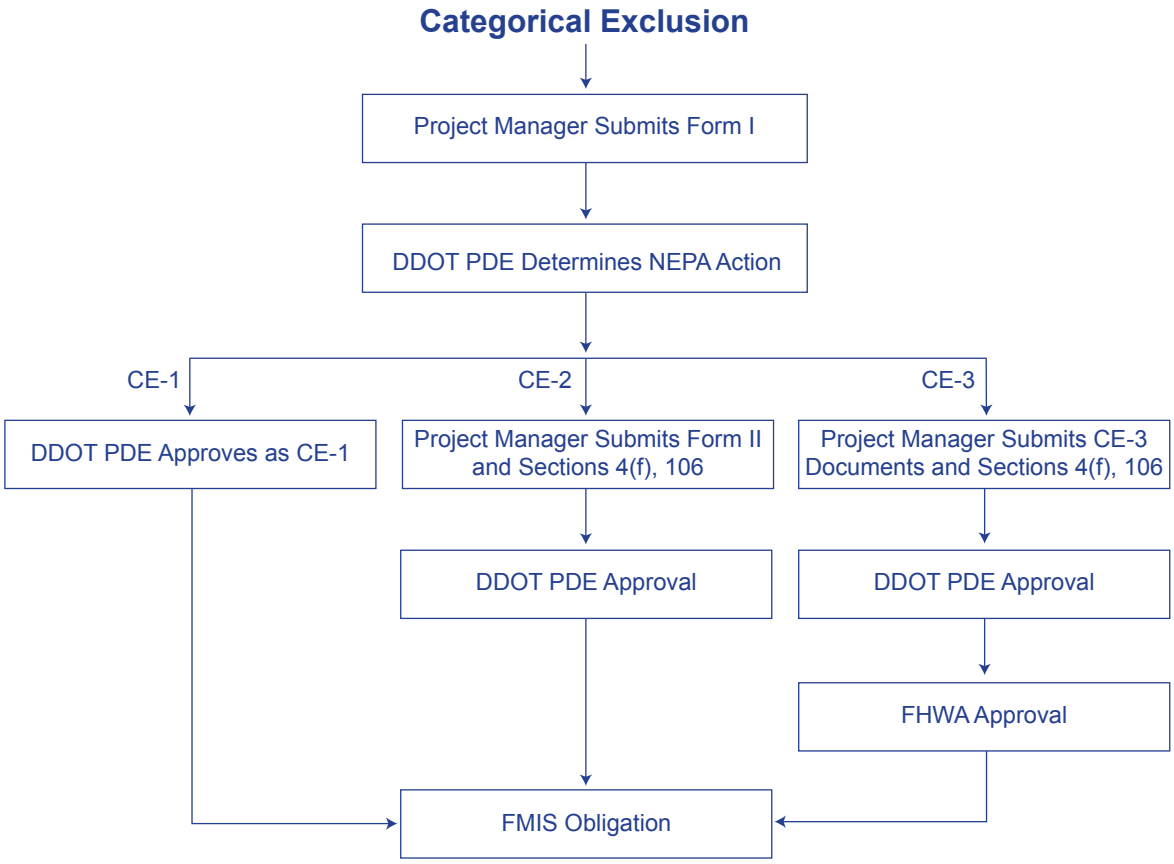


Figure 3-2b NEPA Process Summary

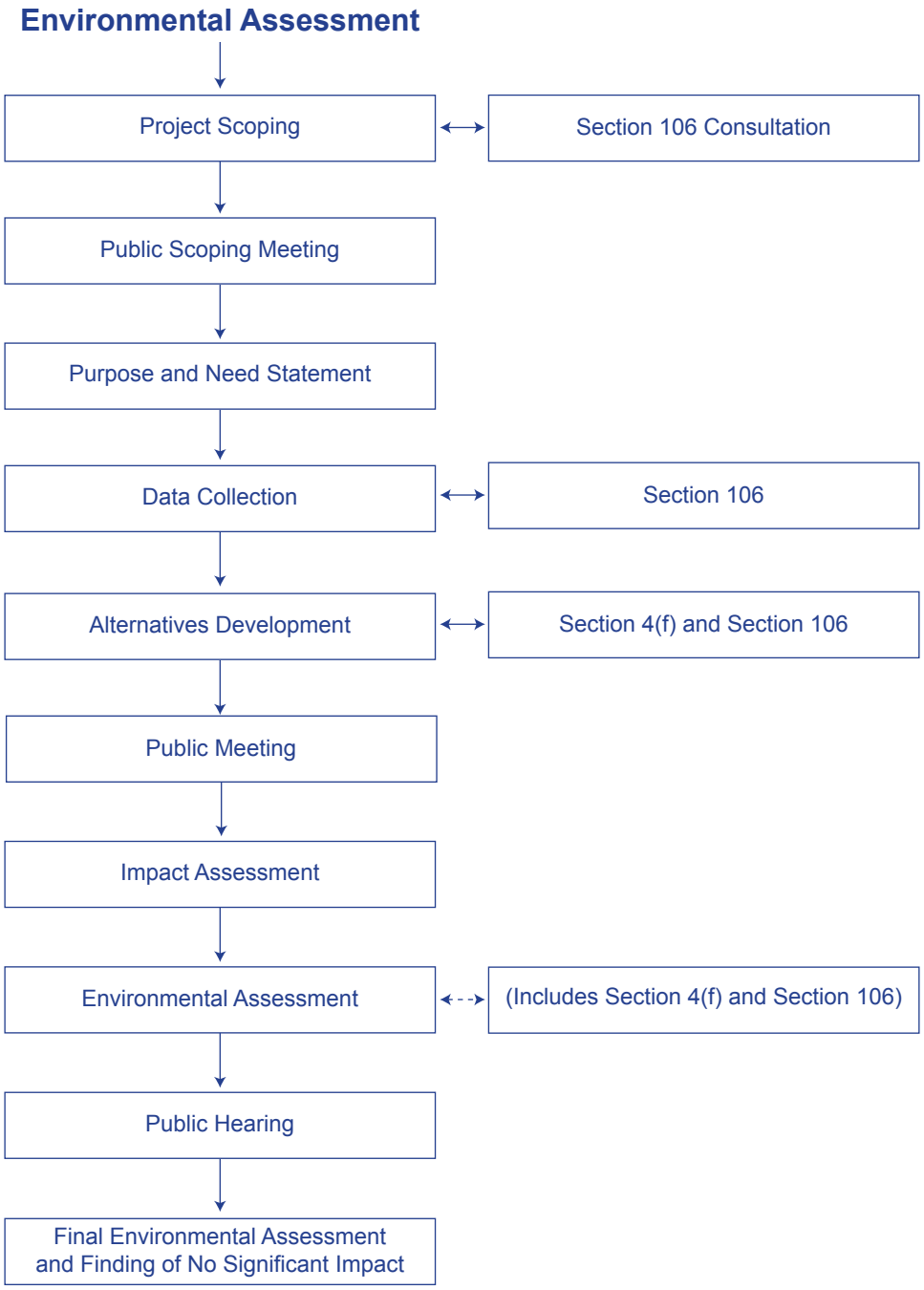
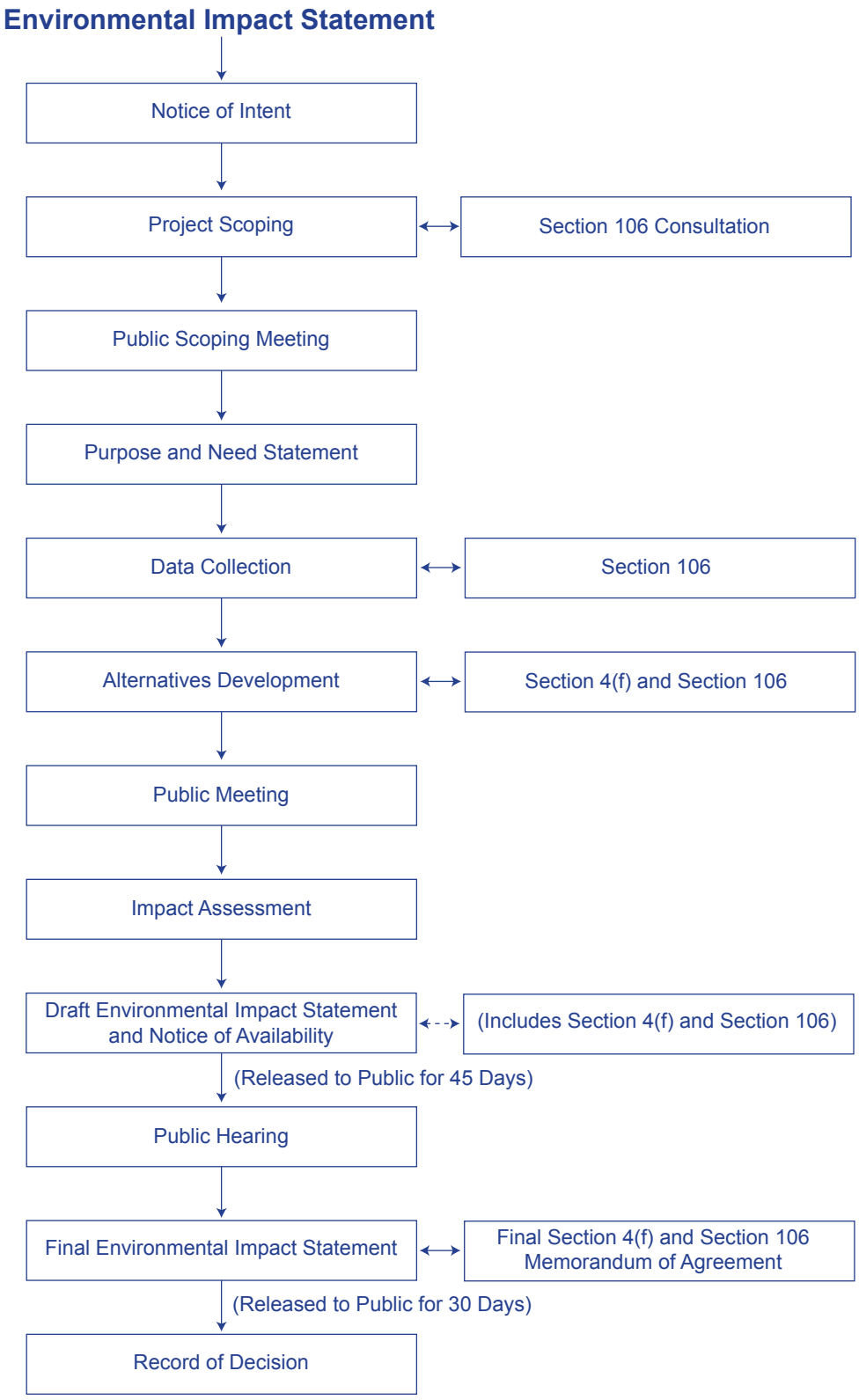


Figure 3-2c NEPA Process Summary



be addressed and before the project proceeds to final design and construction.

3.2.5 Project Scoping

Once the planning phase of a project is initiated, the project team should meet with stakeholders to develop a better understanding of the project context. (See Chapter 13, Context-Sensitive Solutions, for details.) Both the project scoping process and the public involvement process are important tools that should be used to obtain public and agency input.

Public involvement can be achieved through two types of public meetings. A smaller project would be expected to involve fewer people and receive less feedback. As such, it could be presented as an agenda item at an advisory neighborhood commission meeting. A more involved project that requires more explanation to the community and involves more people may require a DDOT public meeting held at a public venue, such as a library or school. Chapter 11, Public Involvement, provides additional information about the public involvement process and methods for conducting public meetings.

When possible, public meetings should be scheduled at times that accommodate key stakeholders. During the community meeting, residents and other stakeholders will have a chance to voice their concerns and offer opinions on the project scope of work. Prior to attending the first community meeting, DDOT representatives should recognize that the majority of the neighborhoods have similar concerns and needs that will have to be met in every project planning process.

The following questions represent some of the common concerns that should be explored during this stage of project studies, depending on the type of improvement proposed. Some of these questions may not be answered during this stage, but it would be beneficial to determine whether they are issues that need to be considered as more detail about the study and its alternatives becomes available.

Public Involvement

- Who will be responsible for communicating with the community during the project? What is their contact information, such as phone and email details?
- What updates will be provided?
- In what format will the updates be provided?
- With what frequency will the updates be provided?
- Will there be any required community involvement (such as passing on information in an effort to partner with the community)?
- Will periodic meetings take place?
- Will there be place to log complaints and receive responses to those complaints?
- Will there be a project website?

Parking

- How much parking will be restricted during construction?
- Will alternative parking be provided?
- Will towing be enforced for violators?
- What type of notifications will be posted?

Traffic

- Will there be a required traffic detour?
- If a traffic detour is provided, will it be properly marked?
- Will there be pedestrian access?

Staging

- Where will the contractors stage their equipment?
- Will space for contractor equipment take additional parking away from the community?
- Can we require that the equipment be stored offsite?

Trash Pickup

- Will construction adversely affect trash pickup?
- Will Department of Public Works trucks be able to access dumpsters and garbage cans?

Contact

- Who will be the main contact for onsite complaints and problems during construction?
- What days and hours will this person be available?
- Is there a number available to call after work hours?

Duration

- What is the duration of the construction?

Hours

- What are the hours of construction?

Deliveries

- Will businesses and residents be able to receive deliveries during construction? Will a loading zone be available?

Site Conditions

- Who will be responsible for maintaining the work zone?
- Are there any special needs for storing or maintaining equipment during nonworking hours?
- If the contractor labor is rude or makes or is heard to make inflammatory statements, who should the business or resident contact?

Noise

- What noise should the community expect to hear during construction?
- Will there be any flexibility due to business or residential constraints?

Vibration from Equipment

- Will there be a survey of property prior to construction?
- If there is perceived damage to the property, who should the business or resident contact?

Further clarification on specific needs unique to that community can be addressed during future public meetings and discussions. Additional information about this process can be found in Chapter 11, Public Involvement.

3.2.6 Commitments

A commitment is typically made in response to an undesired circumstance created by a proposed project. The commitment to mitigate a project impact may be agreed upon with a resource or regulatory agency or a specific property owner, which could include local government bodies with jurisdiction over impacted property. Simple compliance with DDOT standard specifications would not normally constitute a commitment, unless the application of the standard specification itself carries special requirements.

Commitments are typically framed through coordination with resource or regulatory agencies in response to impacts created by a proposed project. Because the work contained in a commitment is often an element of the permitting process for a resource, execution of commitments should be considered a binding agreement upon which the construction of the project itself is contingent.

Examples of commitments may include:

- Provisions for bicycle or pedestrian facilities
- Vibration monitoring of historic structures near the project area
- Aesthetic treatment or special plantings and landscaping
- Wetland mitigation, including type, location, size, timing of plantings and hydrological testing, and similar measures
- Construction of noise barriers, including type, height, location, and any special design characteristics (such as surface treatment or color)

Commitments may be made at any point during project development. Commitments that are made during project planning, especially those that are required as part of resource agency coordination to obtain a permit, will be recorded in the environmental document for the project.

As the project moves into the design and construction phases, the commitments made during the planning phase that require specific actions during construction should be noted in the project plan documents. Such actions may include the provision of fencing to protect sensitive areas near the project, restrictions on construction activities during certain hours, or related activities. Commitments may also be made during the design phase that are a result of public involvement during this phase or from coordination with stakeholders.

When the commitment is related to required mitigation, descriptions of commitments should include enough information for the reader to understand what is being mitigated, what the mitigation concept is, where and when the mitigation will occur, who is responsible for the mitigation (especially if the party is other than DDOT), and future maintenance requirements, if applicable.

Responsibilities

During each phase of the project, the DDOT project manager or resident engineer is responsible for ensuring compliance with commitments made during earlier phases of project development.

As a project moves from one phase of development to the next, the first action of the new project manager should be to familiarize himself/herself with the commitments made in the prior phases of work.

Format for Recording Commitments

Environmental Evaluation Forms and Environmental Commitments Forms, also called project "green sheets," should be used to record commitments. It is recommended that green sheets be filed in a discrete location in the project filing system (i.e., a "green sheets" folder).

3.3 Final Design

The Design phase of a project typically means the Final Design Phase.

23 CFR 636.103, defines the term "Final Design" as: "Final Design means any design activities following preliminary design and expressly includes the preparation of final construction plans and detailed specifications for the performance of construction work."

23 CFR 636.103 characterizes the term "Preliminary Design" as "Preliminary design defines the general project location and design concepts. It includes, but is not limited to, preliminary engineering and other activities and analyses, such as environmental assessments, topographic surveys, metes and bounds surveys, geotechnical investigations, hydrologic analysis, hydraulic analysis, utility engineering, traffic studies, financial plans, revenue estimates, hazardous materials assessments, general estimates of the types and quantities of materials, and other work needed to establish parameters for the final design. Prior to completion of the NEPA review process, any such preliminary engineering and other activities and analyses must not materially affect the objective consideration of alternatives in the NEPA review process" During the design phase, the recommended alternative is subjected to further, more detailed study. The focus shifts from identifying what should be built to how it should be built. In other words, during this phase, specifics are studied with respect to materials, the order of construction, the details of traffic management during construction, the methods for erosion control, and other similar concerns. The work during this phase builds upon the preliminary engineering completed during project planning and incorporates the environmental commitments, including efforts to avoid and minimize impacts

to natural and socioeconomic resources. The final products of this phase are plan documents and specifications, which are used to secure bids from contractors and to guide the construction of the project.

3.3.1 Public Involvement

Public input should be solicited at least twice during the design of a transportation project. The initial contact should be near the start of the design phase. Stakeholders, including residents and business owners, should be allowed to provide opinions and feedback on the aesthetics of the project and express their concerns about the impact that construction of the project will have on the surrounding community. It is important during this phase to understand the impacts that road closures, lane closures, detour routes, construction noise, and vibration may have on the community. The preliminary design phase and the 65 percent design completion stage are two excellent points at which to involve stakeholders. Chapter 11, Public Involvement, provides additional information about public involvement during all phases of project development.

3.3.2 Commitments

As the project moves into the design phase, ensuring follow-through on prior project decisions, particularly those related to environmental permitting, is critical. The design team should familiarize itself with the commitments made during the planning phase of the project. The emphasis at this point is on carrying forward prior commitments such that those related to how the project is designed are reflected in the plan documents and those that will require continuing follow-through during construction are recorded accurately and in a location where they are easily noticeable. A determination should be made how to best document the commitment so that the intended audience is aware of the commitment, whether the audience is the designer, consultant, other divisions within DDOT, or individuals involved in subsequent phases of the project, including the contractor, subcontractor, or resident engineer, who are interpreting the additional requirements.

3.4 Construction

Construction is in many ways the most "public" phase of a project. Despite the public and agency coordination undertaken in earlier phases of the project, the period during which earth is moved, ground is broken, and structures are erected is the most visible period of the project's development. During this phase, particular care should be given to following the commitments and agreements made earlier in the project.

3.4.1 Public Involvement

Public involvement should be continued throughout the construction phase. The public involvement requirements during this phase may vary from project to project, but should include regular briefings of resident and business groups, press releases, or special signing to inform the public of upcoming construction activities and their duration. Chapter 11, Public Involvement, provides additional information about public involvement during all phases of project development.

3.4.2 Commitments

As the project moves into the construction phase, the emphasis shifts to the implementation of the commitment. At the outset of work during construction, all key staff members should be made aware of commitments and their requirements. Where applicable, individuals should be assigned responsibility for overseeing implementation.

Of note during this phase is that some commitments will have one-time applicability, while others may require years of ongoing action. For example, tree clearing may be prohibited during the first year of construction during the breeding season of a bird species, but monitoring of a wetland mitigation site may be required for years.