

PRELIMINARY DESIGN ORDER

REFERENCE



U.S. DEPARTMENT OF
TRANSPORTATION

**Federal Highway
Administration**

Order

Subject
**FHWA Policy on Permissible Project Related Activities
During the NEPA Process**

Classification Code	Date	OPI
6640.1A	October 1, 2010	HEPE-1

Par.

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1. **What is the purpose of this Directive?** This Directive clarifies the Federal Highway Administration's (FHWA) policy regarding the permissible project-related activities that may be advanced prior to the conclusion of the National Environmental Policy Act (NEPA) process.
2. **Is this a new Directive?** Yes. This is a new Directive.
3. **What authorities govern this Directive?**
 - a. Title 23, Code of Federal Regulations (CFR), Section 771.113(a) ([23 CFR §771.113\(a\)](#)) provides the following: "The lead agencies in cooperation with the applicant (if not the lead agency), will perform the work necessary to complete a finding of no significant impact (FONSI) or a record of decision (ROD) and comply with other related environmental laws and regulations to the maximum extent possible during the NEPA process. This work includes environmental studies, related engineering studies, agency coordination, and public

involvement. However, final design activities, property acquisition, purchase of construction materials or rolling stock, or project construction shall not proceed until the following have been completed, except as otherwise provided in law or in paragraph (d) of this section:

- (1) The action has been classified as a categorical exclusion, or a FONSI has been approved, or a final environmental impact statement has been approved and available for the prescribed period of time and a ROD has been signed;
- (2) For actions proposed for FHWA funding, the Administration has received and accepted the certifications and any required public hearing transcripts required by Title 23, United States Code (U.S.C.), Section 128;
- (3) For activities proposed for FHWA funding, the programming requirements of 23 CFR, part 450, subpart B, and 23 CFR, part 630, subpart A, have been met.

b. Title 23, CFR, Section 636.103 (23 CFR §636.103), defines the terms “Preliminary Design” and “Final Design” as follows:

- (1) “*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.”
- (2) “*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.”

c. Title 40, CFR, Section 1502.2(f) (40 CFR §1502.2(f)) provides the following: “Agencies shall not commit resources prejudicing selection of alternatives before making a final decision (Sec. 1506.1).”

- d. Title 40, CFR, Section 1506.1(a) (40 CFR §1506.1(a)) provides the following: “Until an agency issues a record of decision, as provided in §1505.2 (except as provided in paragraph (c) of this section), no action concerning the proposal shall be taken which would:
 - (1) Have an adverse environmental impact; or
 - (2) Limit the choice of reasonable alternatives.”

4. What definitions are used in this Directive?

- a. **Design-bid-build.** The traditional project delivery method where design and construction are sequential steps in the project development process. With the design-bid-build method, a contracting agency may award a design contract to an engineering firm using a qualifications-based procurement process and then, when the design phase is complete, a construction contract will be awarded to a contractor with the lowest responsive bid through a competitive process.
- b. **Design-build.** A project delivery method where both the design and construction phases of the project are combined into one contract and awarded to a single entity. With the design-build method, the contracting agency may award the contract on a low-bid basis or best value basis through the evaluation of certain factors that are identified in a request for proposals.
- c. **Final design.** For purposes of this Directive, the term “final design” shall have the same meaning as defined at 23 CFR §636.103, which is stated in Paragraph 3b(1) above, and clarified in this Directive.
- d. **NEPA decision.** The point in the NEPA evaluation process at which the Federal lead agency issues a CE, FONSI, or a ROD.
- e. **Preliminary design.** For purposes of this Directive, the term “preliminary design” shall have the same meaning as defined at 23 CFR §636.103, which is stated in Paragraph 3b(2) above, and clarified in this Directive.
- f. **Project delivery mechanism.** The method used by a contracting agency to deliver a project, including the design-bid-build and design-build methods.

5. **What is FHWA's policy regarding which project activities may be advanced prior to a NEPA decision?**
- a. State departments of transportation (DOTs) and other contracting agencies may perform preliminary design activities prior to a NEPA decision regardless of the project delivery mechanism that is used. However, final design activities may not be advanced until a NEPA decision has been issued.
 - b. The definitions of *preliminary design* and *final design* found at 23 CFR §636.103, and clarified in this Directive, shall be relied upon by the FHWA regardless of the project delivery mechanism used.
6. **What activities may be considered preliminary design for purposes of this Directive?**
- a. As specified in the definition of *preliminary design*, preliminary design encompasses general project location and design concepts. The activities that relate to defining general project location and design concepts are those needed to establish the parameters for final design.
 - b. The definition of *preliminary design* includes examples of specific activities that are needed to adequately analyze alternatives and establish the parameters for final design. These activities are considered preliminary design. However, the activities specified in the definition are not the only activities that are considered preliminary design. Appendix A provides examples of other activities considered to be preliminary design.
 - c. The activities specified in the definition of *preliminary design* and Appendix A are deemed to not materially affect the objective consideration of alternatives or have adverse environmental impacts. However, on a case-by-case basis, if the division administrator believes that special factors are present related to the NEPA analysis, division administrators may determine that one or more activities listed in the definition of *preliminary design* and Appendix A do materially affect the objective consideration of alternatives in the NEPA review process or have adverse environmental impacts. In such cases, the activity shall not be advanced as preliminary design.
 - d. The list of activities in the definition of *preliminary design* and Appendix A is not exclusive. Other activities necessary to the NEPA decision and that establish the parameters for final design may proceed as preliminary design so long as those activities do not

materially affect the objective consideration of alternatives in the NEPA process or have an adverse environmental impact. The determination as to whether any activity materially affects the objective consideration of alternatives or has an adverse environmental impact is a discretionary FHWA determination that is to be made by the division administrator. In making this determination, division administrators should consider the factors identified in Paragraph 6e below. Division administrators may make this determination on a programmatic or case-by-case basis. For activities that are not identified in the definition of *preliminary design* or Appendix A, division administrators must consult with the Office of Project Development and Environmental Review (HEPE-1) in deciding whether to advance the activity as preliminary design in order to ensure nationwide consistency.

- e. In determining whether any activity that is not needed to complete the NEPA process or to obtain other environmental permits or approvals materially affects the objective consideration of alternatives, division administrators must focus on whether the level of activities advanced prior to the NEPA decision goes too far in focusing on a particular alternative. In making this determination, division administrators may consider and balance any relevant factors, including:
 - (1) The actual bias on the part of the decisionmaker that the proposed preliminary design activity to be advanced will create with respect to any alternative under consideration;
 - (2) The perception of bias on the part of the community at large with respect to the advancement of the proposed preliminary design activity;
 - (3) The extent to which the proposed preliminary design activity is specific to only one alternative under consideration;
 - (4) The degree of preliminary design activities advanced for any given alternative relative to other alternatives under consideration;
 - (5) The estimated cost of the proposed preliminary design activity standing alone is substantial; and
 - (6) The degree to which the proposed preliminary design activity relates to any specific point of controversy regarding an alternative under consideration.

- f. In all cases, regardless of what activities are advanced prior to a NEPA decision, division administrators must exercise independent judgment and retain the discretion to approve any reasonable alternative under consideration. Division administrators retain this discretion regardless of the amount of preliminary design activities advanced (in terms of both quantity and cost) for any alternative.

7. What activities are considered final design for purposes of this Directive?

- a. The activities in the definition of *final design* are considered to be final design. Other activities constituting final design include final plans, project site plan, final quantities, and final engineer's estimate for construction.
- b. Activities considered to be advanced as preliminary design for a project but rejected as materially affecting the objective consideration of alternatives or having an adverse environmental impact are considered final design.

8. What safeguards should be taken to ensure the FHWA does not authorize final design activities?

- a. In project agreements in which Federal funds are authorized for preliminary engineering, a notation should be made that Federal funds are authorized only for preliminary design.
- b. The execution or modification of a project agreement to authorize final design for design-bid-build projects shall not occur until after the NEPA decision. Also, as provided at 23 CFR §636.106(a)(7), the execution or modification of the project agreement to authorize final design and physical construction for design-build projects shall not occur until after the NEPA decision. However, preliminary design activities may be authorized for both design-bid-build and design-build projects.
- c. Division administrators shall work with their State DOTs to develop State specific preliminary design policies for:
 - (1) Direct oversight projects;
 - (2) State administered projects;
 - (3) Local public agency projects; and

- (4) Design-bid-build, design-build, and other project delivery methods that may be used in that State.
 - d. For design-build projects, a contract may be awarded prior to the NEPA decision. In these cases, the contract should be divided into two phases, such as “notice to proceed 1” and “notice to proceed 2.” The work in “notice to proceed 1” should be limited to preliminary design, and the work in “notice to proceed 2” should include final design and construction. The contract should clearly state that no commitment is being made to any alternatives under consideration in the NEPA process, that all alternatives will be fairly considered, and that the issuance of “notice to proceed 2” is conditioned upon the selection an alternative in the NEPA decision. You should refer to 23 CFR §636.109 and §636.302 for the express regulatory requirements regarding the release of a request for proposals and award of a design-build contract prior to a NEPA decision.
9. **Should the division administrators report any information to Washington headquarters?**
 - a. Starting on September 30, 2011, and each year thereafter, division administrators will submit a report to the Office of Project Development and Environmental Review listing whether the Division has executed an agreement with the State DOT to develop State-specific preliminary design policies in accordance with this Directive.
 - b. Starting on September 30, 2011, and each year thereafter, division administrators will submit a report to the Office of Project Development and Environmental Review identifying the activities permitted to be advance as preliminary design that are not listed in the definition of *preliminary design* or Appendix A.
10. **Will guidance regarding the implementation of this Directive be issued?** Appendix B to this Directive contains guidance and explanatory notes regarding the issuance and implementation of this Directive. Additional guidance may be issued in the future as needed.
11. **Who should I contact for additional information?**

Project Development Team Leader
Office of Project Development and Environmental Review (HEPE-10)
202-366-1598

Pre-Construction Team Leader
Office of Program Administration
202-366-2221

Senior Attorney Advisor
Office of Chief Counsel
202-366-4928

Attachments



A handwritten signature in blue ink, appearing to read "Victor M. Mendez".

Victor M. Mendez
Administrator

Appendix A – Preliminary Design Activities

Preliminary design activities include, but are not limited to:

1. Activities listed in the definition of *preliminary design*: 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.
2. Other activities: design and engineering activities to be undertaken for the purposes of defining project alternatives; completing the NEPA alternatives analysis and review process; complying with other related environmental laws and regulations; environmental justice analyses; supporting agency coordination, public involvement, and permit applications; development of environmental mitigation plans; development of typical sections, grading plans, geometric alignment (horizontal alignment, vertical alignment and any clearances necessary to meet approved design criteria), noise wall justifications, bridge type/size/location studies, temporary structure requirements, staged bridge construction requirements, structural design (substructure and superstructure), retaining wall design, noise wall design, design exceptions, guardrail length/layout, existing property lines, title and deed research, soil borings, cross sections with flow line elevations, ditch designs, intersection design/configuration, interchange design/configuration, pavement design, storm/sanitary sewer design(plan/profile), culvert design, identification of removal items, quantity estimates, pavement details/elevation tables, and preliminary traffic control plans to be maintained during construction.

Appendix B – Explanatory Notes

Q1 Why is this Directive being issued?

A1 This Directive is being issued to clarify FHWA policy regarding the extent to which design activities may be permitted prior to a NEPA decision without compromising the integrity of the NEPA process.

Q2 Why is the FHWA clarifying the scope of preliminary design?

A2 The FHWA is clarifying the scope of preliminary design to help ensure consistency with respect to the advancement of preliminary design among the various project delivery mechanisms used by the States in the Federal-aid highway program and to ensure compliance with applicable legal requirements. In the design-build regulations at 23 CFR 636.109(a)(5), the FHWA permits State departments of transportation to proceed with preliminary design activities. These activities, as defined at 23 CFR 636.103, include any activity that establishes the parameters for final design that does not materially affect the objective consideration of alternatives in the NEPA review process. Accordingly, by making the definition of *preliminary design* in the design-build regulations applicable to other project delivery mechanisms, the FHWA is able to bring consistency with respect to the advance of preliminary design throughout the Federal-aid highway program.

Q3 Is allowing activities beyond what is necessary to complete the NEPA process consistent with FHWA regulations?

A3 Yes. In the preamble to the final rule establishing 23 CFR 771.113(a) (52 FR 32646), the FHWA states that 771.113(a) supports and should be read in conjunction with 40 CFR 1506.1 to ensure that NEPA decisions are not influenced by a previous commitment to a particular course of action. In the FHWA's experience, the activities in the definition of *preliminary design* and Appendix A are not of such a significant nature as to commit the agency to any particular course of action. With respect to design-build projects, the definition of *preliminary design* (23 CFR 636.103) was modified in the final rule in response to comments that limiting preliminary design activities to those activities necessary to complete the NEPA review process was too restrictive. As a result, the FHWA modified the definition in the final rule (72 FR 45329) to include any activity needed to establish the parameters for final design so long as the activity does not materially affect the objective consideration of alternatives in the NEPA review process.

Q4 Should the activities listed in the definition of *preliminary design* and Appendix A be allowed on a routine basis for any alternative?

A4 Yes. These activities are deemed not to bias the NEPA process or have adverse environmental impacts whenever advanced for one or more alternatives.

Q5 May the FHWA prohibit any of the activities listed in the definition of *preliminary design* and Appendix A?

A5 Yes. On a case-by-case basis, depending on the circumstances of the project, the division administrator may prohibit the activity if the division administrator believes that the activity will materially affect the objective consideration of alternatives in the NEPA review process or cause an adverse environmental impact.

Q6 May division administrators allow activities to be advanced that are not listed in the definition of *preliminary design* and Appendix A?

A6 Yes. Division administrators may allow additional activities that do not constitute final design to be advanced as preliminary design if the division administrator determines that such activities do not materially affect the objective consideration of alternatives in the NEPA review process and/or cause adverse environmental impacts. Division administrators may permit such activities either on a case-by-case basis or programmatic basis. In making the determination as to whether any activity materially affects the objective consideration of alternatives in the NEPA review process or causes adverse environmental impacts, division administrators must consult with the Office of Project Development and Environmental Review (HEPE-1), and document the decision.

Q7 How should the level of preliminary design activities conducted for any alternative affect the presentation of the alternatives in the NEPA document?

A7 Under 40 CFR 1502.14(a) and (b), agencies must rigorously explore and objectively evaluate all reasonable alternatives and devote substantial treatment to each alternative considered in detail sufficient to enable reviewers to evaluate their comparative merits. As such, the comparison of alternatives has to be done in a fair and balanced manner. Key issues for the NEPA alternatives evaluations in these cases will be the use of "apples-to-apples" comparisons of alternatives, and the assurance that additional information developed on any particular alternative is evaluated to identify and address any new or different information that might affect the choice of alternatives. If there are substantial differences in the levels of information available for the alternatives, it may be necessary to apply assumptions about impacts or mitigation to make the comparisons fair. For example, if mitigation is designed only for the preferred alternative, then

assumptions that comparable measures can be taken to mitigate the impacts of the other alternatives should be included in the comparative analysis of the alternatives even though those other alternatives are not designed to the same level of detail. This comparison of mitigation across alternatives will ensure that any particular alternative is not presented in an artificially positive manner as a result of its greater design detail. If the environmental impacts identified at the higher level of design detail are substantially different than other alternatives under consideration, the level of analysis conducted for other alternatives should be reviewed to determine whether additional work on other alternatives is warranted.