


Nebraska Department of Transportation

Roadway Design Division – Policy Letter

Policy Number: **DES 23-04**

Approval Date: _____ By:  NDOT Roadway Design Engineer
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Approval Date: 10/04/2023 By: Brandie Neemann NDOT Project Development Engineer

Approval Date: _____ By: _____ FHWA Division Administrator

FINAL DESIGN

This Policy affects the NDOT Roadway Design Manual, Chapter Two, Roadway Design Process, Sections 20 and 22, Chapter Eleven, Highway Plans Assembly, Sections 1, 6, and 7; Chapter Twelve, Cost Estimating and Funding, Sections 2 and 7; Chapter Fifteen, Right-Of-Way, Sections 2 and 6, Chapter Sixteen, Pedestrian and Bicycle Facilities, Section 11; Chapter 17, 3R, Sections 10 and 17.

Purpose

The purpose of this policy is to define project-related design activities as they occur in relation to the documentation of the National Environmental Policy Act (NEPA) decision.

Final Design

By FHWA Definition;

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." (23 CFR § 636.103)
2. "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." (FHWA Order 6640.01a).
3. "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.” (23 CFR § 636.103)

4. “Other (*Preliminary Design*) 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.” (FHWA Order 6640.1A)

Before *Final Design* may proceed, the Roadway Design and Project Development Divisions will verify that the preliminary design plans, draft special provisions, and other project requirements reflect the commitments made in the final NEPA Document and the NEPA decision remains valid. After the commitments have been verified and any necessary changes have been made to the preliminary design plans and special provisions, Roadway Design will submit the Plans Package to Construction Division’s PS&E Unit. The Plans Package submitted to PS&E shall include preliminary design plans, preliminary quantities, and draft special provisions.

After the NEPA Decision is documented, *Final Design* may commence. During *Final Design*, PS&E will review and finalize the plans package and return the package to Roadway Design for any necessary changes. Roadway Design will return the Plans Package to PS&E, where the final cost estimate is prepared by Construction Division based on the revised quantities. The Construction Division will conduct a final Contracts Review prior to FHWA (or NDOT) approval. Any changes that may have resulted in a change from the NEPA Decision will be reviewed by Project Development during the Environmental Certification process.

As result of this review and decision the Final Construction Plans, Detailed Specifications, final quantities, and final engineer’s estimate are prepared for advertisement and letting.

Implementation

Roadway Design and Project Development will be begin utilizing this definition of “*Final Design*” upon approval by FHWA for State Projects.