Practical design is an approach to making project decisions that focuses on the specific problem the project is intended to address. This performance-based approach looks for lower-cost solutions that produce the best return on investment in order to meet outcomes that communities and stakeholders have identified. Practical design allows more flexibility and freedom to innovate, and considers incremental solutions to address uncertainties in future scenarios.

Practical design policy at WSDOT requires us to focus on the project need and seek the most reasonable, lowest-cost solution that meets the need. The purpose of the Design Manual is to reflect current policy, providing a uniform set of methods and procedures for implementing that policy, and communicating relevant information to those involved in the development of projects on state highways.

Because WSDOT designers are required to comply with the Design Manual, and the Federal Highway Administration (FHWA) has agreed to approve designs that follow its guidance, it’s critical that the Design Manual and its guidance reflect current policies as closely as possible.

What sort of changes are happening in 2015?

Our work on context classification and road types continues, and will set the stage for full implementation of practical design in 2016. Recent work on reexamining project scope and need has indicated challenges and opportunities in our current approach to project design – in particular, our matrix-based approach to design level and element selection. The matrices, found in Chapter 1100, are based on broad assumptions about how design elements affect the project. These assumptions affect our ability to adapt to project need, context, and modal compatibility, which are all important components of our practical design vision. For this reason, interim guidance is needed to better align our current practices now with our practical design goals, while our 2016 work continues.

This interim guidance, called Basis of Design, will also be a useful transition to full implementation. Basis of Design will combine recent work on practical design guidance with a structure intended to support our full implementation in the future.

Basis of Design is a format and a process currently in development for documenting information about a project that provides for a more accurate selection of design elements and dimensions that best fit the project need. Basis of Design will provide a framework and the guidance necessary to document context and modal compatibility, project need, design controls, project alternatives considered, and design level and element selection. Modified and full design will remain, with enhancements that allow for flexibility where appropriate. The result will be a template and associated guidance that will take the place of the role now filled by the design matrices (see “out with the old, in with the new”).

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Out with the old—Design Matrices . . .

Under the matrix-based design approach to design decisions, a matrix row is chosen based on the project type. Alternatives are then developed that include the design elements that are identified in the matrix.

When will these changes take place?

Policy, guidance, and templates that will support Basis of Design will be developed in March. A Special Point of Contact has been identified in each region to manage a preliminary review of this material in April (see right-hand column). A limited number of 1–2 day region workshops is contemplated near the end of April to test out the new guidance. Ongoing coordination with regions, HQ, and FHWA will take place in May as suggestions from April are incorporated. A normal statewide Design Manual review is expected in June, with final approval and publication in July.

In with the new—Basis of Design . . .

In the future, design elements will be selected only if they are associated with the preferred alternative, and they contribute to satisfying the project’s need.

How will the regions be involved?

Special Points of Contact (SPOC) were identified by region. Their responsibility is to manage early review of these changes in April, help organize a region workshop (if needed), and help with program outreach. The primary SPOCs are:

- ER – Ken Olson
- NCR – Chris Keifenheim
- SCR – Robert Washabaugh
- SWR – Dave Bellinger
- OR – Bill Elliott
- NWR – Cathy George

Other reviewers have also been identified to help. The normal region Design Manual review is expected in June, with final approval and publication in July.