

Asset Management by Performance Based Practical Design

Questions and Answers ^[1]

General Topics

What's do all the acronyms mean?

Acronym	Definition
BOSCD	Bureau of Structure Certification Document
DJ	Design Justification
FDP	Facilities Development Process
FSC	Final Scope Certification
OCP	Operation Certification Process
PBPD	Performance-Based Practical Design
SCD	Safety Certification Document
SCP	Safety Certification Process
RBEST	Risk Based Environmental Scoping Template

Is Perpetuation the same as Replace-in-Kind?

The term perpetuation is used instead of Replace-in-Kind since it better represents the concept and intent of WisDOT's Perspective on Performance-Based Practical Design (see [FDM 11-1-5.2](#)).

Where should questions on the Safety Certification Process (SCP) be directed?

The SCP is defined in [FDM 11-38](#). The Bureau of Traffic Operations (BTO) is the primary point-of-contact for the SCP. Any questions can be directed to: DOTBTOSafetyEngineering@dot.wi.gov. For project-specific questions, there are Region contacts available which may be able to assist.

Examples and training materials for the SCP can be found on the WisDOT website:

<https://wisconsin.dot.gov/Pages/doing-bus/local-gov/traffic-ops/manuals-and-standards/manuals.aspx>

What is the records retention requirements for Safety Certification Document (SCD) and Final Scope Certification (FSC)?

The record retention/disposition authorization (RDA) has been updated to include SCD and FSC. WisDOT staff can access the RDA at this [link](#).

The SCD falls into the category of Design Study Reports (DSR), Exception to Standards Reports (ESR), and Design Justifications for Highway Improvement Projects which have a retention period of date of final project cost statement plus 40 years.

The FSC falls into the category of Regional Offices Design Project & Contract File which has a retention period of date of project final cost statement and/or warranty termination date plus six years.

Due to the differences in retention period, it is recommended to use the DSR to document key scoping discussions and decisions that are not already documented in the environmental document or other areas of the DSR.

[1] This document is meant to be supplemental information to help with the implementation of policies related to asset management and performance based practical design. Manuals such as the FDM and PMM supersede this document.

Are Final Scope Certificate (FSC) and Safety Certification Document (SCD) required on all projects?

All SHR projects (3R and backbone programs) should have an FSC. See [FDM 11-4-3](#).

Most projects require an SCD. See [FDM 11-1-10 attachment 10.1](#) for when an SCD is required. One exception to this are Highway Safety Improvement Program (HSIP) projects. For a standalone HSIP project which originates outside of the normal improvement program, the HSIP application can replace the SCD. For projects loaded into the improvement program which undergo network screening and receive HSIP funding, the HSIP application cannot replace the SCD and both processes will need to be completed. See [FDM 11-4-3](#), [FDM 11-38](#), and [FDM 11-1-10 attachment 10.1](#).

Other programs such as Majors/Megs follow the processes of those particular programs. See [Mega Project Guidelines website](#).

Local bridge guidance is found in [FDM 3-20](#). Other local program projects will follow the process covered by the Modernization improvement strategy and the S-3 design criteria application unless justified through an appropriate safety analysis. Crash data is available from UW TOPS lab for all local roads. If the local sponsor wishes to use the SCD it can be considered but is not required. See [FDM 11-40-1.2.1.1](#). Design Justifications will be documented in the DSR for local program projects same as the 3R/Backbone process.

Who will interpret FDM requirements or provide guidance to the regions if there are questions on how the guidance should be implemented?

The region Program Control Design Engineers, BPD Design Oversight Engineers assigned to the region and BPD Asset and Project Management section will serve as resources for interpretation of FDM guidance. BPD and other DTSD staff with particular areas of expertise may be brought into discussions on a case-by-case basis. Region Programming and Safety engineers will serve as resources for interpretation of theme and safety-related topics. BPD Asset and Project Management section will serve as a conduit for working with DTIM's Office of Asset and Performance Management for situations that need future clarification or guidance.

Can consultants be used to do work prior to Life Cycle 11 (LC11) if resourcing is shown on the chart in [FDM 3-1 Attachment 1.1](#) after LC11?

Outsourcing remains an option for all the same purposes it has been used in the past regardless of life cycle.

Resourcing must be completed before a project is changed to Life Cycle 12 (LC12), but resourcing efforts may begin prior to LC11 if needed.

1 Project & Design Criteria Questions

How much soil information is needed in the Project Definition phase (prior to Final Scope Certification (FSC) complete)?

Enough soil investigation/analysis should be completed prior to FSC to determine pavement service life of the proposed pavement treatment and the typical section that it will require. Enough information must be available to provide a reasonable level of confidence that the scope/schedule/budget identified in the FSC is not going to be impacted by potential outcomes from further soils investigations.

Can the pavement elevation be changed on Perpetuation projects?

When pavement needs require a thicker pavement structure, pavement elevation can be raised on Perpetuation projects, and other projects that fall into the S-1 application of design criteria, as long as it can be done without widening the existing subgrade and can be done without degrading safety. Grade raises require documentation to show safety will not be degraded.

How will requirements for NHS routes related to pedestrian accommodations and paved shoulders be handled on Pavement Replacement projects that fall under S-1 application of design criteria?

FHWA has agreed to WisDOT's guidance in [FDM 11-46](#) for due consideration for bicycle and pedestrian accommodations.

When are environmental documents to be completed and how will the safety analyses and alternatives be coordinated with the environmental process?

The development of the SCD takes place early in the scoping process and results in options to be considered for the project to address specific safety issues. The SCD documents all alternatives evaluated within the SCP and should not state a definitive recommendation for an alternative. Identified alternatives must go through the necessary environmental processes including public review and comment process before they can officially document the final project alternative in the environmental document and DSR. Some of the safety and environmental processes can happen concurrently. The FSC must clearly document the potential alternatives that should be carried through the environmental and design process.

The delivery schedule and delivery and construction budgets identified in the FSC should reflect a level of risk the region is willing to take for a particular project.

The Risk-Based Environmental Scoping Template (RBEST) must be completed prior to the FSC.

Should Public Involvement Meetings (PIMs) be held before the Final Scope Certification (FSC) is completed??

Enough outreach needs to be done prior to the FSC to set the final scope.

What design criteria should be used for roadway reconfigurations?

Since most roadway reconfigurations do not impact the footprint (shoulder points or curb & gutter limits) S-1 application would be used for most features. The SCD documents all alternatives evaluated within the SCP and should not state a definitive recommendation for an alternative. Any reasonable width adjustments should be carried forward

within the improvement project process and be considered with other factors to meet the purpose and need of the project.

Can aesthetics be included on perpetuation and rehabilitation project? If so, how are they funded?

Aesthetics and other add-ons requested by the locals may be considered in any project if the inclusion does not impact the let schedule or delivery schedule needed to match the improvement type (meets the thematic pavement needs).

Aesthetics are fundable with project funds as long as the mitigation treatment is required by a federal or state law and included in the project environmental document. Aesthetics beyond these requirements must be locally funded through a State Municipal Financial Agreement (SMFA) and State Municipal Maintenance Agreement (SMMA).

Will locals be able to add utility or other work to Perpetuation and Rehabilitation projects?

Whether local utilities or other local driven work can be included in Perpetuation or Rehabilitation projects will depend on the schedule impacts, the type of work to be included, and if the proposed work would change the work type. Locals should be encouraged to schedule utility work to coincide with a pavement replacement project or a project with a longer-term service life such as a pulverize and relay or full depth cold-in-place recycle.

How are culverts handled on Perpetuation and Rehabilitation projects?

The Culvert Asset Management Program (CAMP) has been implemented statewide. This provides for routine inspection of all culverts on the state system. This will be used in determining the expected life of culverts and culvert treatment that may be necessary with an improvement project. [FDM 13-1-30](#) contains guidance for culverts that are being replaced on Perpetuation and Rehabilitation projects.

Can improvements be made to address other roadway issues on Perpetuation or Rehabilitation Projects? (i.e., frost heaves, sloughing slopes, ditch cleaning, spot curb and gutter repair, spot storm sewer repair)?

Work related to maintaining the integrity of the core roadway for the proposed pavement treatment life can be done under Perpetuation or Rehabilitation work types. This work needs to be documented in the FSC and must be consistent with the improvement (theme compliant).

If a project does work outside the “footprint of the roadway” (shoulder points/curb & gutter), will it always be a Rehabilitation work type?

If the work outside the “footprint of the roadway” is related to geometric improvements resulting from safety, operation, environmental or ancillary factor evaluations, the project will fall into the Rehabilitation improvement strategy, however S-2 design criteria only applies to the specific areas needing corrective actions as identified in any of those evaluations. S-1 design criteria applies to the remaining project corridor.

Work related to maintaining existing features with remaining life less than the proposed pavement treatment life (example drainage – culverts or spot curb and gutter) or other FDM required improvements (example beam guard end treatments or curb ramps) can be done under Perpetuation improvement types. This work needs to be documented in the FSC.

On projects with no crash flags where the existing roadway doesn't have certain systemic or safety-beneficial treatments (e.g., Centerline rumbles/EAT/Safety Edge/wet reflective edge line/shoulder rumble strips on 5' paved shoulders), does project replace exactly what was there (i.e., without those things) or do those things need to be added?

Follow FDM guidance for non-SCD required elements. The intent is not to discourage the installation of proven safety-beneficial treatments (safety edge, rumble strips) on improvement projects outside the SCD process as long as their inclusion:

- is supported in the FDM
- is documented in the FSC or DSR
- retains a thematically compliant treatment
- meets the project specific Purpose and Need

If there is a safety mitigation for a specific flagged area of a project, can that same mitigation be applied elsewhere in the project?

Flagged areas are required to be investigated through the SCP. Countermeasures cannot be applied elsewhere in the project without being analyzed through an economic appraisal for the entire portion of the proposed application of the countermeasure.

Can paved shoulders be added/widened on a perpetuation project?

A project stays within the Perpetuation definition if the proposed pavement design stays within the footprint of the existing road (subgrade shoulder points). Therefore, safety-driven shoulder widening can be done under a Perpetuation work type if that work stays within the subgrade shoulder points. If not needed for safety, changes to paved shoulders can only be included if they are determined necessary through an additional evaluation (operational, environmental, or ancillary factor), must meet the project specific Purpose and Need and stay within the existing subgrade shoulder points. See [FDM 11-1-10.4](#).

Is a re-evaluation of the crash data going to be needed if the design process for a given project is extended or an advanceable project doesn't get advanced in a timely manner?

Unless there are changes within the project limits that might impact the safety of the roadway (changes to geometrics or adjoining land use), there should be no reason to reevaluate Meta-Manager safety data and redo the SCP analysis.

What happens if something comes up after the Final Scope Certification (FSC) is complete?

Changes need to adhere to the region's change management process. All subsequent scope certification documents (pavement, structure, et.al.) that are part of the original FSC will need to be reviewed to determine if the change impacts their original certification. Changes need to be documented in the final environmental document and DSR. If changes take place after those documents are signed, they will be revised and re-signed accordingly. No revision to the FSC is required.

After the FSC has been approved, if a new alternative is developed or project limits are expanded, the SCP shall be followed and documented with an amendment to the SCD. If this occurs within the scoping phase of a project, the amended SCD shall be documented within the FSC and supersedes the original SCD. If this occurs after the scoping

phase, the SCD amendment shall be documented within the Design Study Report (DSR) and environmental document, as appropriate.

How will capacity, congestions and other operational issues be addressed when safety concerns are not identified in the Safety Certification Document (SCD)?

The Operations Certification Process (OCP) is being finalized. The OCP will address when and how to incorporate operational issues into improvement projects.

Where will the Intersection Control Evaluation (ICE) fit into the new process? Why isn't it shown in the FDP (Facilities Development Process) chart?

Not all tasks are included in the table in FDM 3-1 ([FDM 3-1 attachment 1.1](#)) for reasons of legibility/usability. Tasks related to each phase can be found in the Phase Activity List ([FDM 3-1 attachment 1.2](#)).

The ICE Process is a separate process from the SCP. If proposed countermeasure(s) include a change of traffic control, is a new type of alternative intersection, have access/median modifications, or result in an offset intersection, an ICE is required. See [FDM 11-25-3](#). The SCP and ICE process can be done concurrently or independently.

Will Asset Management principles need to be applied to Traffic Impact Analysis (TIA) studies? Will TIA roadway improvements fall into the Modernization improvement strategy and require S-3 application of design standards?

TIA are not subject to the SCP and need to adhere to S-3 design criteria. TIA may be required to complete an ICE report. See [FDM 11-25-3.1.1.1](#)