It has been found that deviation and evaluate upgrade requests are most easily processed when they follow a basic outline of presentation. The information provided in this memorandum is simply a reiteration of what has already worked successfully in the past.

Since deviation and evaluate upgrade requests are to be presented as stand alone documentation, they must include at the beginning a brief summary of the project and basic related design criteria. The following items should normally be included in the introduction to the request.

INTRODUCTION

Include the following items in the introduction:

- Route Designation
- Project Limits
- Project Description (Safety or Improvement needs)
- Highway Classification (see the State Route Log)
- Interstate, NHS or Non NHS Status
- Current Average Daily Traffic (ADT) or Design Hourly Volume (DHV)
- Truck Percentage and/or DDHV
- Design Speed, and Posted Speed
- Rural or Urban condition, see the State Route Log
- Terrain Classification, see the State Route Log
- Funding Program(s)
- Applicable Matrix and Design Levels used.

This is pretty much the same information that you would be using in the opening of your Approval Memorandum.

BODY OF THE REQUEST

The following four-step outline works well for the body of the request:

1. Identify the geometric element's existing condition (i.e. lane/shoulder widths are 10 ft./ 2 ft., etc.).
2. Make reference to the guideline for that element (i.e. the lane/shoulder widths should be 12 ft./ 4 ft.) and the Design Manual page or figure where the guideline can be found.
3. Describe the possible alternatives (i.e. build to full design level, the “modified” or proposed design, or do nothing) and what the impacts of each alternative are (i.e. wetland impact, right of way, railroad encroachment, etc.). Give a rough estimate of the cost to construct to full design level. Compare this to the overall project cost of building the proposed “modified” design. Discuss the Benefit/ Cost for each alternative when appropriate. The minimum number of alternatives are the three noted above. Keep in mind that there may be several variations on the “modified” design.
4. Recommend an alternative, provide justification and request approval for the deviation or evaluate upgrade.

Attachments that support the request should also be included. Possible items are, accident history, plans, sketches and photos.

The HQ Project Development website has examples of deviations:

http://www.wsdot.wa.gov/eesc/design/projectdev/

GENERAL JUSTIFICATIONS [see *Design Manual* § 330.04 (4)]

(FOR ANY DEVIATION or EVALUATE UPGRADE)

The following is a list of some general categories used for justification of deviations and evaluate upgrades:

- Environmental impact
- Accident History and/or Low Impact Severity
- Benefit/ Cost ratio
- Social impact
- Consideration of adjacent highway sections and/or existing conditions
- Relationship with future improvements
- Right of Way issues
- Cost to build to guidelines that would prevent construction

So you've written a deviation or evaluate upgrade, and you feel pretty good about it. But don't relax too much yet, because there is still much to do. After that first draft of the deviation is written, the designer should go back, read it once again and ask…

"WHAT WOULD MY ASSISTANT STATE DESIGN ENGINEER (ASDE) SAY?"

- Is a cost breakdown provided for each of the different alternatives discussed?
- What is the Benefit / Cost of the different options?
- If the deviation justification includes "delay of project" – DROP IT! It's not relevant.
- What is the driving motivation for this deviation? If it is cost… ?
- Are wetlands or sensitive areas involved? If so, that impact needs to be quantified: by type, quantity potentially impacted, mitigation required, costs, etc.
  < don't sacrifice safety for reed canary grass >
- What is the current situation on that part of the roadway: ADT, truck DHV, operating speeds, posted and design speed, etc.
- Are there other options? Examine them; discuss them…
- So there is no accident history here… was a safety study done? What about a Roadside Analysis of the roadway? Could the existing conditions contribute to an accident?
- Is there a similar existing situation on one of WSDOT's highways that is functioning without any problems?
- What does Traffic say?
- Will an easement work instead of right of way purchase?
- How does it compare to AASHTO?

THE FINAL STEP

A title/approval cover sheet is requested to be included with your deviation request submittal. See the deviation cover sheet shell outline on the NWR Design Resource web page. See *Design Manual* Chapter 330 for approval levels and the NW Signature Authority for region requirements.

A slightly different title/ approval cover sheet is to be used for an evaluate upgrade request. See the evaluate upgrade cover sheet shell outline NWR Design Resource web page. See *Design Manual* Chapter 330 for approval levels and the NW Signature Authority for region requirements.

The Professional Engineer (Project Engineer) who submits the "deviation" or "evaluate upgrade" is requested to stamp and sign the cover sheet with their professional seal.

Deviations and evaluate upgrades should be submitted through your Engineering Manager to your Design Reviewer. They will handle the process.

When submitting deviations or evaluate upgrades it should be done as early as practicable in the design process. It is desirable to have these submitted together in a single package with each request numbered. This way, if a request is denied, it will not hold up other deviations or evaluate upgrades. Numbering deviations and evaluate upgrades helps us in tracking them and helps you in cross referencing them in your Design Parameters.

Be ready to answer questions and fine tune your deviation or evaluate upgrade. These rarely get signed on their first "go-around". Avoid words like "hazard," "safer," "standard," "deficient," "sub", etc. Use positive phrasing whenever possible. Don't provide personal opinions. These are documents that should reflect engineering judgment. The reviewer, the approval authority and future readers do not know the project as intimately as you do. Specifics should be described. If references are noted they should include pages, figures and dates. A highlighted copy as an attachment to your request can be effective as well.

If early coordination with the ASDE and FHWA has occurred, meeting minutes or conversation logs could be an attachment to your request. During the early coordination it may have been determined that your request is acceptable, but this does not exonerate you from providing quality documentation in your DDP.

The final original approved document should be noted on your Design Variance Inventory System form and be included in your DDP.