

Memorandum

To : MR. JEFF L. FUNK
North Region Division Chief
Design and Engineering Services

Date: August 31, 1998

From : DEPARTMENT OF TRANSPORTATION
NORTH REGION DIVISION OF DESIGN - HYDRAULICS

Subject: Culvert Studies

The following information is provided in order to achieve a degree of uniform understanding of the Culvert Study, its initiators, those who complete it, and its contents. Aspects regarding the generation of the Alternative Pipe Culvert list have been discussed among Materials engineers in Eureka, Redding and Marysville and have been found to be acceptable. The following is proposed to be included in the North Region Operational Plans:

The Materials Branch upon request will perform culvert studies by the Project Engineer. The Materials Branch shall handle coordination with Maintenance, requesting culverts be cleaned prior to inspections. Results of the study will be provided in report format, sealed by a registered engineer. North Region Materials Lab will develop report format. Fieldwork to generate these results will include, but not be limited to, review of each drainage facility, estimation of remaining service life, sampling and testing to determine water pH and soil resistivity and sufficient site review to ascertain the probability of abrasive runoff. It is the responsibility of the Project Engineer to identify each culvert needing a culvert study as determined by As-Built review and field inspection. No request should state "all culverts".

The report provided back to the Project Engineer or other initiating individual will include a list of alternative pipe culverts that would meet the design service life of 50 years. This list will be based upon assumptions made at the site by the Materials Engineer with regard to design velocities and the presence of abrasive runoff. These assumptions will be stated in the report. If, during the design process the Project Engineer determines that design velocities or bedload conditions fall outside these assumptions, it becomes his/her responsibility to initiate a determination of the resulting impacts on the design service life.

Responsibility for determining the hydraulic advantage of smooth flow conduits remains the responsibility of the Project Engineer.

Your concurrence is requested. This procedure would then be included in the North Region Design Operational Plan.

Dennis R. Jagoda / FOR:
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