

ATTACHMENT E

ENGINEERING REPORT (General Guidance)

The Engineering Report is to be prepared by the Consultant and submitted to the Sponsor and/or Department, if possible, prior to starting Plans and Specifications. The Report shall include, at a minimum, a discussion of the following elements which are applicable and any other elements deemed necessary by the Department:

1. Introduction, project overview and consistency with approved ALP, justification, scope, authorization, funding, required environmental actions and schedule.
2. Investigations and evaluations, including pavement history, PCI information, topographic survey data, soil sampling and testing, boring logs, CBR test results, subgrade stabilization considerations, and seasonal frost issues.
3. Pavement design considerations, including pavement types and/or alternates; any unusual design and reasons therefore, selection of design CBR value, traffic distribution, and reported pavement strength.
4. Rehabilitation, strengthening and/or overlay work shall be detailed as to the type of work required, including existing pavement conditions, material selection considerations, thickness design and economic analysis.
5. Construction features which vary from FAA criteria should be identified including the problem(s) facts, alternative solutions, and/ or desired solution. Is the desired solution the most economical?
6. Items such as materials sources, soils, drainage, water for construction, cost of land vs. development, contractor resources, available finances, and stage development. The report should say how these factors affected the decisions made by the Consultant in the design.
7. Explanation of drainage design criteria including explanation of drainage districts data INPUT and off-site drainage impact on design. Include drainage calculations and modeling.
8. Special considerations for local circumstances such as available material, equipment, contractors, and airport sponsored events.
9. Consultant's choice of options for the lighting design; similar explanation of choices made for the drainage, fencing, turfing and marking, including decisions regarding cover crop seeding.
10. Approach conditions which will result from proposed work and comparison with FAA criteria.
11. Analysis of potential RSA determination (if applicable).
12. Development of PCN for runway strengthening and rehabilitation projects.
13. Description of non-AIP work and quantity separation from AIP eligible items.
14. Identify work to be done by others such as utility companies and airports sponsor forces.
15. The Consultant's preliminary estimate of construction costs, fees and expenses shall be included.
16. A discussion of project safety concerns (per guidance explained in FAA AC 150/5370-2F (or current) Operational Safety on Airports during Construction) shall be included.
17. A discussion of project phasing / sequencing and estimate of construction calendar days shall be included.