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MEMORANDUM

TO: ALL BRIDGE DESIGNERS

FROM: HOSSEIN GHARA, P.E.
BRIDGE DESIGN ADMINISTRATOR

SUBJECT: BRIDGE DESIGN TECHNICAL MEMORANDUM NO. 16 (BDTM.16)
STEPPED FOOTINGS

DATE: May 18, 2010

Effective immediately, the following policy shall be applied to all projects within the design phase.

For footings on the same bent which are designed at different elevations, the designer should check the following geotechnical concerns.

Differential settlement:

The differential settlement between footings must be checked. The settlement calculation should consider the induced stress from the adjacent footing foundation. The designer should evaluate the potential structural impact of the differential settlement.

Adverse stress influence of the footing at a higher elevation to the footing at the lower elevation:

The stress from the foundation of the footing at the higher elevation may result in overstressing the foundation of the footing at the lower elevation. The designer should evaluate both the geotechnical and structural impacts.

Column footings may be placed at the different elevations only when the above design checks were made.

This technical memorandum will be posted on the Bridge Design Website: http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/Technical-Memoranda.aspx

Please contact Ms. ZhengZheng "Jenny" Fu (225-379-1321, ZhengZheng.Fu@la.gov) if you have any questions or comments.

HG/zzf