State of California
Department of Transportation

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient

To: **ALL DESIGN SENIORS**
Structure Design
Structure Design Services &
Earthquake Engineering
Division of Engineering Services

MICHAEL J. LEE
Senior Bridge Engineer
Structure Maintenance and Investigations
Division of Maintenance

Date: November 10, 2004

From: **RICHARD D. LAND**
Deputy Division Chief
Structure Design
Division of Engineering Services

JIM APPLETON
Acting Deputy Division Chief
Geotechnical Services
Division of Engineering Services

Subject: Earth Retaining Structure Foundation Review

Memo to Designers 1-35, dated March 1998, provides an overview of the roles and responsibilities of the Structure Design staff and Geotechnical Services (GS) staff in the various phases of the structure portion of project development. The Foundation Review, which is conducted close to or immediately after Draft Structure PS&E (SPS&E), is one of the last project milestones in the SPS&E development process. The intent of the Foundation Review is to verify that all foundation recommendations and foundation testing requirements addressed in the Final Foundation Report have been appropriately incorporated into the Draft SPS&E. Historically, the Foundation Review has been routinely requested for bridge structures but not always for earth retaining structures.

In an effort to minimize possible errors and omissions, a Foundation Review is now required for all earth retaining structures included in a SPS&E. The Geotechnical Design Office Chiefs (GDOC) have been designated as the single-focal point for earth retaining structure Foundation Reviews based on their geographical area of responsibility as follows:

District	Contact Person	Contact Phone	Location
1,2,3,5,6,9 & 10	Roy Bibbens, Chief Geotechnical Design - North	(916) 227-7178	Translab – Sacramento, MS –5
4	Tim Pokrywka, Chief Geotechnical Design - West	(510) 286-4840	District 4 – Oakland, MS –9B
7 & 12	John Ehsan, Chief Geotechnical Design – South 1	(916) 227-4575	Translab – Sacramento, MS –5
8 & 11	Abbas Abghari, Chief Geotechnical Design – South 2	(916) 227-7172	Translab – Sacramento, MS –5

The Structure Project Engineer (PE) shall request a Foundation Review when the Structure P&Q has been completed and the Draft Structure Specifications are available for review. In addition, the Structure Specification Engineer shall be contacted for participation and input in the Foundation Review.

The Structure PE shall send an e-mail to the assigned GDOC requesting a Foundation Review with a minimum of one week advanced notice. The e-mail request shall provide Project EA, County-Route-Postmile, a brief description of the earth retaining structure(s) in the project and either an electronic copy of the Final Foundation Report or a brief description of the foundation recommendations and foundation testing requirements. However, if there is urgency in conducting the Foundation Review, then the e-mail request should be followed up by a telephone call to the GDOC. In any event, the GDOC will assign the Foundation Review and forward the information provided to an appropriate GS staff who will contact the Structure PE to notify them of their assignment.

Based on the information provided, the GS staff will determine if a formal Foundation Review meeting is required or if a phone conference between them and the Structure PE shall suffice. In either case, the Structure PE shall make available for the GS staff a copy of the Structure P&Q, Draft Structure Specifications, Final Foundation Report if not already provided and As-Built Plans as applicable. At the conclusion of the Foundation Review, the GS staff shall issue a Foundation Review Report to the Structure PE, which they will sign, make a copy for their records and return one signed copy to the GS staff.

The above guidelines are interim until Memos to Designers 1-35 is revised. Implementation of these procedures for earth retaining structures designed by the Division of Engineering Services is immediate for new and ongoing design projects.

For additional information regarding the above policy change, please contact the appropriate GDOC based on the area in which the project is located.

Attachment

c: Robert A. Stott
Dolores Valls
Richard Shepard
Bridge Design Office Chiefs
Structure Design & Earthquake Engineering Office Chiefs
Geotechnical Services Office Chiefs

FOUNDATION REVIEW

DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES

To: **Structure Design**

1. Preliminary Report
2. R.E. Pending File
3. Specifications & Estimates
4. File

Geotechnical Services

1. GS (Sacramento)
2. GS

District Project Development

District Project Engineer

Date: _____

_____
Structure Name

_____
District County Route Post Mile

_____
E.A. Number Structure Number

Foundation Report By: _____ Dated: _____

Reviewed By: _____ (SD) _____ (GS)

General Plan Dated: _____ Foundation Plan Dated: _____

☐ No changes. ☐ The following changes are necessary.

FOUNDATION CHECKLIST

Pile Types and Design Loads
Pile Lengths
Predrilling
Pile Load Test
Substitution of H Piles For Concrete Piles ☐ Yes ☐ No

___ Footing Elevations, Design Loads, and Locations
___ Seismic Data
___ Location of Adjacent Structures and Utilities
___ Stability of Cuts or Fills
___ Fill Time Delay
___ Effect of Fills on Abutments and Bents

___ LOTB's
___ Fill Surcharge
___ Approach Paving Slabs
___ Scour
___ Ground Water
___ Tremie Seals/Type D Excavation

_____ _____ _____
Structure Design Branch No. Geotechnical Services

Rev. 11/04