



## Florida Department of Transportation

JEB BUSH  
GOVERNOR


July 25, 2005  
605 Suwannee Street MS # 31  
Tallahassee, FL 32399-0450

DENVER J. STUTLER, JR.  
SECRETARY

**This Memo Has Expired**

### DCE MEMORANDUM NO. 17-05

**TO: DISTRICT CONSTRUCTION ENGINEERS**

**FROM:** Ananth Prasad, Director, Office of Construction 

**COPIES:** William Nickas, Bob Greer

**SUBJECT: ROLE FOR THE STATE CONSTRUCTION STRUCTURES ENGINEER (SCSE) RELATED TO CONSTRUCTION OF CATEGORY 2 BRIDGES**

The Department has had and continues to have, concerns with the quality of construction and inspection of Category 2 (C2) bridges. A definition of Category 2 bridges is provided at the conclusion of this memorandum and is in the FDOT Plans Preparation Manual Section 26.3.2. Over the last few years both the State Construction Office and the State Structures Design Office have become aware of a variety of quality problems on C2 projects. The causes of the quality problems include unacceptable Contractor practices that are not recognized by CEI staff; inadequate Contractor QC; and in some instances, inexperienced and under-trained consultant, contractor and Department staff.

Some of the causes of these concerns have been addressed through various new training and qualification programs, improved design requirements and details, and stronger construction specifications. However, as the Department “raises the bar” on expectations for the quality of construction and inspection of projects, the State Construction Office is expanding the role of the SCSE to serve as a resource in a proactive way.

The role of the SCSE on C2 projects will include the following:

- Attend, when warranted, project events such as critical pre-operations meetings and meetings that take place to resolve and/or discuss critical technical problems.
- Require notification and consultation with the SCSE by the CEI staff on technical matters such as any proposed deviation from the plans and specifications; Contractor means and methods that might adversely impact the performance or durability of the finished bridge; and Contractor proposed corrections of damaged or defective structural components.
- When the need arises, provide on site training related to critical specifications such as post-tensioning, grouting, erection and bolting.
- When requested by the District, provide assistance with evaluating the qualifications of

shortlisted firms for selection of CCEI services on C2 projects.

If a District Construction Office determines that it has a C2 expert that can be assigned the above responsibilities, then the SCSE will have the responsibility of formally confirming that the qualifications and experience of this engineer are acceptable. Only engineers confirmed by the SCSE will be permitted to be the District's bridge construction expert and this engineer will be referred to as the District Construction Structures Engineer (DCSE). The DCSE will assume the responsibilities of SCSE as it relates to bullets 2 and 3 listed above and will be required to get concurrence from the SCSE on critical decisions and to keep the SCSE aware of the status of the project and of non-critical decisions.

It is not our intent to "take over" the management and decision-making on any project nor is it our intent to supersede the authority of CEI or District Construction Offices. However, it is our intent to provide expertise where needed and to assist the Districts through a more formalized approach.

In order to ensure consistent decision making and communication with the SCO and the State Structures Design Office, we are requesting that the SCSE be the single point of contact for all C2 project related inquiries whether construction or design related. The SCSE will consult with the appropriate State Structures Design Office representative if a concern is design related. The SCSE's role is advisory with regard to recommendations; therefore, the final decision on all matters will be made by the District.

The SCSE's expanded role goes into effect as of the date of this memorandum. If you have any questions, please contact Ananth Prasad at 994-4140 sc

#### Definition of Category 2 Structures (PPM 26.3.2)

Category 2 Structures consist of steel box girders, curved steel plate girders, continuous straight steel plate girder bridges with span lengths equal to or greater than 150 feet, cast-in-place concrete box girder bridges, concrete segmental bridges, continuous post-tensioned concrete bridges with or without pretensioning, steel truss, cable stayed, movable bridges, vessel collision designs and any structure with design concepts, components, details or construction techniques with a history of less than five (5) years of use in Florida.

AP/sp