

3460303 PORTLAND CEMENT CONCRETE
COMMENTS FROM INTERNAL/INDUSTRY REVIEW

Stefanie Maxwell
414-4314
stefanie.maxwell@dot.state.fl.us

Comments: (10-20-14)

I suggest keeping the language consistent with the 10 or so other locations in the spec book - overhead truss signs vs. span truss signs.

Response:

Neil Kenis
386-943-5419
neil.kenis@dot.state.fl.us

Comments: (10-27-14)

There is discrepancy between the proposed 346 specification and the proposed 2015 Structures Manual (Volume 3 – FDOT Modifications to LTS-6). The specification indicates mass concrete controls are not needed for drilled shafts supporting miscellaneous structures as most of these are smaller than 5 feet in diameter with extremely limited instances when the shaft diameter exceeds 6 feet. The commentary in the 2015 Structures Manual states “The concrete in drilled shafts with design diameters greater than 6 feet is considered mass concrete.” The envisioned solution will require the Engineer-of-Record (EOR) to add a plan note specifying the shaft as mass concrete in order to invoke the specification; and in some instances the note will be simply omitted. My primary concern is two-fold (1) encouraging EOR’s to add plan notes to override FDOT specifications can lead to unintended consequences and (2) omission of the plan note will not require implementation of the mass concrete specification.

Response:

Katie Kehres

Comments: (11-10-14)

Mass concrete control provisions are to be determined by the Design Engineer. It depends on the mix design used, controlled by many variables like type of cement, cement content, water cement ratio, size of aggregate, entrained air etc. The spec portion containing drilled shafts does not regulate any note regarding mass concrete. Hence it is suggested that the proposed spec change may not be necessary. Suggest leaving language for other miscellaneous structures

→ **346-3.3 Mass Concrete:** When mass concrete is designated in the Contract Documents, provide an analysis of the anticipated thermal developments in the mass concrete elements for all expected project temperature ranges using the selected mix design, casting procedures, and materials. ~~Mass concrete control provisions do not apply to drilled shafts supporting mast arms, cantilever signs, signal, or overheadspan truss signs, high mast lighting, poles or other miscellaneous intelligent transportation system (ITS) structures.~~

Response:

Katie Bettman
904-360-5391
katie.bettman@dot.state.fl.us

Comments: (11-12-14)

I thought the intent of this change was to not require a Mass Concrete Plan when the drilled shaft is designed with a 6 ft diameter or less, but is built with oversized temporary casing which makes the diameter greater than 6 ft. The current language doesn't specify a size requirement. Although larger diameter shafts are rare, they do exist.

The Structures Design Guidelines indicates the Criteria for Denoting Mass Concrete in Plans. The 346 Specification should indicate what triggers mass concrete when not designated in the plans. The requirement for mass concrete for drilled shafts for structural purposes also needs to be clarified. If the drilled shaft is designed at 6 ft or less and is not designated as mass concrete in the plans, the Specifications need to specify whether a Mass Concrete Plan is necessary when the Contractor elects to use a casing that makes the shaft greater than 6 ft. These specifics needs to be stated in the 346 Specification because the Designer can't designate mass concrete based on what the Contractor decides to do.

I think there will still be confusion if either drilled shafts for miscellaneous structures are designated as mass concrete in the plans or if drilled shafts for structural elements are not designated as mass concrete in the plans.

Response:
