

**New Jersey Department of Transportation
CORRECTIVE ACTION NOTICE**

CAPITAL PROGRAM SUPPORT

Director: Walter McGrosky Telephone: (609) 530-5257

CAN No. CAN077

Approved:

Walter McGrosky

Date: March 1, 2010

Subject: Construction activity impacts on existing and proposed structures.

Bureau(s) Affected:

All Design Consultants, In-house Design Services, Capital Program Support and Construction Services and Materials.

Description of Issue(s): Effects that may be induced on any existing structure within the project limits due to the construction activities that are required to construct all proposed, temporary and/or permanent elements (including utility relocations) for the project.

Corrective Action Plan: The designer shall be responsible to carefully evaluate these issues. Analyses of these construction related activities shall be discussed and included in the Geotechnical Report and accounted for in the Constructability Checklist as follows:

1. Vibration

Vibration induced by pile driving, sheeting installation, the use of a vibratory hammer, and other construction equipment/machinery shall be evaluated. The sustainability and stability of adjacent existing and/or the proposed bridges, structures, and buildings shall be evaluated due to anticipated vibration. The maximum particle velocity threshold value should be established if required. If necessary, bracing and/or temporary support systems shall be proposed to enhance the existing structure condition for the construction activities.

2. Settlement

The site condition shall be evaluated for potential liquefaction, soil consolidation, and associated settlement due to pile driving, sheeting installation, dewatering activity, and other temporary loads (e.g. stock piled soils). The foundation system of adjacent existing and/or the proposed bridges, structures and buildings should be investigated for the potential effects of construction activities. If necessary, soil borings and/or other subsurface investigations may need to be expanded to verify the soil conditions at existing foundation systems of adjacent bridges and structures.

3. Noise

Noise levels should be evaluated due to anticipated construction activities. Ambient noise level may need to be studied to compare the noise level anticipated due to proposed construction activities.

Implementation: Immediate