

**North Carolina Department of Labor
Division of Occupational Safety and Health**

Raleigh, North Carolina

Field Information System

Operational Procedure Notice 121C

Subject: Steel Erection Standard

A. Purpose.

This notice establishes North Carolina's policy for Steel Erection effective December 1, 2002, when North Carolina enacts OSHA's revised Steel Erection Standard, Subpart R of 29 CFR 1926, "Occupational Safety and Health Standards for the Construction Industry."

B. Scope.

This policy applies to construction activity throughout North Carolina.

C. References.

- *North Carolina Register*, January 2, 2002, 13 NCAC 07F .0201 "Construction."
- 29 CFR 1926, "North Carolina Occupational Safety and Health Standards for the Construction Industry," with amendments through February 1, 2001.
- *Federal Register*, Vol. 66, No. 12, January 18, 2001, pages 5196-5280, Final Rule: Safety Standards for Steel Erection.
- 13 NCAC 7F.0201(4), Steel Erection

D. Action.

OSHNC agencies will conduct training and outreach activities, consultative services, technical assistance and compliance inspections in accordance with the guidelines contained in this OPN.

E. Effective Dates.

This OPN cancels and replaces OPN 121B. It is effective on the date of signature and will remain in effect until canceled or revised by the Director.

F. Discussion.

The new standard addresses the hazards that have been identified as the major causes of injuries and fatalities in the steel erection industry. These include hazards associated with working under loads; hoisting, landing and placing decking; column stability; double connections; landing and placing steel joists, and falls to lower levels.

North Carolina state-specific modifications to the new OSHA Subpart R have been promulgated in 13 NCAC 7F.0201(4). These modifications address the definition of steel erection activities, non-traditional steel erection activities, and the installation of shear connectors. These modifications replace 1926.750(b)(1) and (2), and 1926.754(c)(1)(i).

CPL 2.1.34, dated March 22, 2002 is adopted verbatim with the exception of the paragraphs listed below. Compliance officers will adhere to the guidelines of this document with these modifications:

Chapter 3, III.A.2.

The CSHO must initially determine if the activity being inspected is covered by Subpart R as modified by 13 NCAC 7F.0201(4). The first question to ask: Is this activity listed in the North Carolina Administrative Code? If so, then it is covered by the standard. The North Carolina amendment added the rigging of bridge steel girders and deleted the installation of curtain walls, window walls, siding systems, miscellaneous metals, and ornamental iron and similar metals from the definition of steel erection activities in 1926.700(b)(1).

Chapter 3, III.A.3.

Any other activity not defined as steel erection in 1926.750(b)(1) (as amended by 13 NCAC 7F.0201(4)) or in 1926.761(c) is not considered a steel erection activity, and employees must be protected from fall hazards at 6 feet or greater as stipulated in Subpart M. The amendment to 1926.750(b)(2) contained in the administrative code provides a list of activities which in the original standard are considered steel erection, but which the North Carolina amendment defines as "leading edge work." Citations for failure to provide fall protection should reference the appropriate standards in Subpart M, and include a statement referencing 1926.750(b)(2) as amended by 13 NCAC 7F.0201(4) indicating that activity is not covered under Subpart R.

Chapter 3, III.E.2.

The NCAC amendment to 1926.754(c)(1)(i) requires that employees be protected from fall hazards of six (6) feet or more to a lower level exacerbated by tripping hazards of shear connectors (*including, but not limited to headed steel studs, steel bars or steel lugs*), reinforcing bars, deformed anchors, or threaded studs attached to the top flanges of steel members such as girders, joists, beams, and beam attachments. Check steel beams for shear connectors, and if installed, ensure that employees are protected by one of the following:

1. Shear connectors that project vertically or horizontally across the top flange of a member not being welded or installed until the metal decking or other walking/working surface is in place (field-installed shear connectors).
2. All employees working on members with shop or pre-installed shear connectors will be protected from fall hazards six (6) feet or greater by suitable, as defined in 1926.32(s), fall protection systems, including guardrail systems, personal fall arrest systems, or safety nets.

3. Shop or pre-installed connectors that project vertically from or horizontally across the top flange of the member can be covered by a temporary decking, metal or wood box until the metal decking, or other suitable walking/working surface, is installed or until final construction covers the shear connectors.

Chapter 4, Question 3, 4a, 4b, 6, 9, and 10 are invalidated by the North Carolina amendments and should be disregarded.

Signed on Original

Jack Forshey
Standards Supervisor

Signed on Original

Kevin D. Beauregard
Safety Standards Officer

7/21/03

Date of Signature