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# Final Regulation Agency Background Document

Agency name	Safety and Health Codes Board/Department of Labor and Industry	
Virginia Administrative Code (VAC) citation		
Regulation title	Safety Standards for Fall Protection in Steel Erection, Construction Industry	
Action title	Amendment to Safety Standards for Steel Erection	
Document preparation date	November 12, 2003	

This information is required for executive review (<a href="www.townhall.state.va.us/dpbpages/apaintro.htm#execreview">www.townhall.state.va.us/dpbpages/apaintro.htm#execreview</a>) and the Virginia Registrar of Regulations (<a href="legis.state.va.us/codecomm/register/regindex.htm">legis.state.va.us/codecomm/register/regindex.htm</a>), pursuant to the Virginia Administrative Process Act (<a href="www.townhall.state.va.us/dpbpages/dpb">www.townhall.state.va.us/dpbpages/dpb</a> apa.htm), Executive Orders 21 (2002) and 58 (1999) (<a href="www.governor.state.va.us/Press\_Policy/Executive\_Orders/EOHome.html">www.governor.state.va.us/Press\_Policy/Executive\_Orders/EOHome.html</a>), and the Virginia Register Form, Style, and Procedure Manual (<a href="http://legis.state.va.us/codecomm/register/download/styl8">http://legis.state.va.us/codecomm/register/download/styl8</a> 95.rtf).

#### Brief summary

Please provide a brief summary of the proposed new regulation, proposed amendments to the existing regulation, or the regulation proposed to be repealed. Alert the reader to all substantive matters or changes. If applicable, generally describe the existing regulation. Do **not** state each provision or amendment or restate the purpose and intent of the regulation.

This regulatory language, approved by the Board, will require protection for steel erection workers from falls from heights starting at 10 feet above a lower level (i.e., working surface). Federal OSHA's requirement for fall protection in this situation starts at 15 feet. In the draft language, a singular exception to the 10-foot fall protection requirement is for employees working as "Connectors." A "Connector" is defined in § 1926.751 as "...an employee who, working with hoisting equipment, is placing and connecting structural members and/or components."

The exception for Connectors is based on VOSH's determination that during the interval when structural steel beams are in the air being hoisted into position for assembly and joining, a greater hazard may exist if Connectors are tied off rather than giving them freedom of movement to avoid accidental contact with the steel structural pieces as they are hoisted into position for

assembly. This final language for the standard, if adopted, would provide Connectors with the option of utilizing a personal fall arrest system or not when steel is being lifted in the air, if they determine that a greater hazard of injury exists from the swinging steel.

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Although controlled decking zones (CDZ) would remain prohibited, this final standard provides that access to leading edge decking operations are limited to only those employees engaged in leading edge work, as is provided in the <u>federal</u> standard.

In addition, the final standard would provide that the boundaries of a leading edge decking operation shall be designated and clearly marked. These requirements provide a means of fall protection by restricting access to a leading edge decking area where a fall distance of up to 30 feet could exist for employees not utilizing a personal fall arrest system or other conventional form of fall protection.

Section 16 VAC 25-145-50, which is entitled Use of Control Lines to Demarcate Leading Edge Decking Operations, will provide guidance to employers on how to limit access to leading edge decking operations. This section is substantially similar to and would replace the current Appendix D to the Steel Erection Standard entitled "Appendix D to Subpart R -- Illustration of the Use of Control Lines to Demarcate Controlled Decking Zones (CDZs): Non-mandatory Guidelines for Complying with § 1926.760(c)(3)."

[NOTE:

Consistent with current practice, in the interim period until a final standard adopted by the Board becomes effective, VOSH will continue to use its longstanding administrative policy of enforcing 16 VAC 25-175-1926.28(a) and 16 VAC 25-175-1926.105(a) to provide 10-foot fall protection for steel workers, except for employees working as Connectors.]

## Statement of final agency action

Please provide a statement of the final action taken by the agency including (1) the date the action was taken, (2) the name of the agency taking the action, and (3) the title of the regulation.

On November 5, 2003, the Safety and Health Codes Board adopted as a final regulatory standard of the Board, Safety Standards for Fall Protection in Steel Erection, Construction Industry, 16 VAC 25-145-10 through 16 VAC 25-145-50, with an effective date of January 15, 2004. The Board adopted more stringent requirements in lieu of adopting an identical version of federal OSHA's paragraphs (a), (b) and (c) of §1926.760.

## Legal basis

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Please identify the state and/or federal source of legal authority to promulgate this proposed regulation, including (1) the most relevant law and/or regulation, including Code of Virginia citation and General Assembly bill and chapter numbers, if applicable, and (2) promulgating entity, i.e., the agency, board, or person. Describe the legal authority and the extent to which the authority is mandatory or discretionary.

If the final text differs from the text at the proposed stage, please indicate whether the Office of the Attorney General has certified that the agency has the statutory authority to promulgate the final regulation and that it comports with applicable state and/or federal law.

The Safety and Health Codes Board is authorized by Title 40.1-22(5) "to adopt, alter, amend, or repeal rules and regulations to further, protect and promote the safety and health of employees in places of employment over which it has jurisdiction and to effect compliance with the federal Occupational Safety and Health Act of 1970 . . . as may be necessary to carry out its functions established under this title."

In making such rules and regulations to protect the occupational safety and health of employees, the Board shall adopt the standard that most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity.

However, such standards shall be at least as stringent as the standards promulgated by the federal Occupational Safety and Health Act of 1970 (P.L.91-596). In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experiences gained under this and other health and safety laws."

At its October 18, 2001 meeting, the Safety and Health Codes Board adopted the preponderance of federal OSHA's revised Safety Standards for Steel Erection (66 FR 5195 and 66 FR 37137) as §1926.750 through §1926.761 and the amended §1926.500 covering Fall Protection.

Upon the recommendation of the Department, paragraphs (a), (b) and (c) of §1926.760 of the federal rule were not adopted. These paragraphs deal with fall protection requirements for steel erection workers and specifically "Connectors" and employees working in "controlled decking zones" (CDZ),.

In the alternative, VOSH sought Board approval to continue to use its current administrative policy of enforcing federal identical standards, §§1926.28(a) and 1926.105(a), to provide 10-foot fall protection for steel workers, except for employees working as "connectors." In addition, controlled decking zones (CDZ) would be prohibited. After considering the Department's request to continue its administrative policy of enforcement, the Board chose to memorialize the 10-foot height requirement policy of the Department into regulation and asked the Department to begin a Notice of Intended Regulatory Action (NOIRA).

The Office of the Attorney General has certified that the Board has the statutory authority to

promulgate the proposed regulation and that it comports with applicable state and/or federal law.

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## Purpose

Please explain the need for the new or amended regulation. Describe the rationale or justification of the proposed regulatory action. Detail the specific reasons it is essential to protect the health, safety or welfare of citizens. Discuss the goals of the proposal and the problems the proposal is intended to solve.

Although not adopted by the Board when it approved the majority of revised federal Subpart "R" in 2001, 29 CFR 1926.760 (a) of the revised federal standard requires conventional fall protection at heights greater than 15 feet, except for connectors and leading edge decking workers; paragraph (b) of the federal standard requires that each connector be protected from fall hazards of two stories or 30 feet, be trained and be provided personal fall arrest system at heights more than 15 feet and up to 30 feet; and paragraph (c)) under the federal standard allows for controlled decking zones (CDZ), over 15 feet and up to 30 feet for initial decking installers and protection from fall hazards for employees on leading edge of more than 30 feet.

VOSH has investigated at least 18 fatal construction accidents over the last nine years, involving falls of less than 15 feet. Although none of these accidents involved any steel erectors, they tragically demonstrate the existence of a fatal hazard with falls less than 15 feet. The large majority of the accidents involved fatal head injuries, where the use of personal fall arrest systems, guard rails, safety nets, or working from an elevated work platform would have prevented the victim's head from hitting the ground.

The controlled decking zone (CDZ) provisions in the <u>federal</u> standard, 29 CFR §1926.760(c)), provide no fall protection for leading edge decking workers other than training on how to avoid falls. The training of decking workers and limiting access to a work area does not provide equivalent protection to an engineering control or a personal fall arrest system when an employee actually does fall for whatever reason. Although steel erectors may be generally better trained, than the average construction worker to work at heights, when they do fall, the hazard and risk of serious injury or death are exactly the same for a steel erector as for any other construction worker.

The intent of this rulemaking is to establish in regulation the current VOSH administrative policy whereby VOSH regulations §§1926.28(a) and 1926.105(a), are used to require steel erection employers to provide protection for steel erection workers from falls at or above 10 feet.

As noted previously, a singular exception to the use of §1926.28(a) and §1926.105(a) in steel erection is for employees working as "Connectors." A "Connector" is defined in §1926.751 as "…an employee who, working with hoisting equipment, is placing and connecting structural members and/or components." The intended rulemaking would not impact the Board's decision to prohibit controlled decking zones.

The final standard, adopted by the Board, would also clarify fall protection requirements for employees working in leading edge decking operations, and provide guidance to employers on

how to restrict access to a leading edge decking area where a fall distance of up to 30 feet could exist for employees not utilizing a personal fall arrest system or other conventional form of fall protection.

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#### Substance

Please identify and explain the new substantive provisions, the substantive changes to existing sections, or both where appropriate. A more detailed discussion is required under the "All changes made in this regulatory action" section.

This final regulatory action will result in no change to the existing requirements for steel erection. The adoption will place in regulatory form the existing VOSH administrative policy to insure worker protection at or above 10 feet. The Board determined that this final regulation is essential to protect worker health and safety from falls in construction from heights of 10 feet to 25 feet. The existing federal OSHA regulation would not provide any protection for workers operating at such heights.

#### **Issues**

Please identify the issues associated with the proposed regulatory action, including:

- 1) the primary advantages and disadvantages to the public, such as individual private citizens or businesses, of implementing the new or amended provisions;
- 2) the primary advantages and disadvantages to the agency or the Commonwealth; and
- 3) other pertinent matters of interest to the regulated community, government officials, and the public. If there are no disadvantages to the public or the Commonwealth, please indicate.
- No additional impact on the public is anticipated as a result of this regulatory action that merely codifies the current and longstanding VOSH administrative policy. Virginia employers have long been familiar with VOSH's compliance guidelines as enforced in conjunction with §§1926.28(a) and 1926.105(a). Virginia employees will continue to be protected from falls from heights of 10 feet or greater which have been covered by VOSH's compliance policy as enforced in conjunction with §§1926.28(a) and 1926.105(a).
- No additional fiscal impact to the Department is anticipated from the adoption of the final standard. Employees in Virginia will continue to be protected from falls from heights of 10 feet or greater which have be covered by VOSH's compliance policy as enforced in conjunction with §§1926.28(a) and 1926.105(a).

3) The proposed regulatory changes are technologically feasible. This regulatory change would have no fiscal impact to the community, government officials or the public as it would not modify employee safeguards or impose additional costs on employers. VOSH has enforced under an administrative policy a 10-foot fall protection requirement in steel erection for over 15 years through the enforcement of §§1926.28(a) and 1926.105(a). The final standard will memorialize existing VOSH requirements that have been enforced through administrative policy.

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## Changes made since the proposed stage

Please describe all changes made to the text of the proposed regulation since the publication of the proposed stage. For the Registrar's office, please put an asterisk next to any substantive changes.

Section	Requirement at	What has changed	Rationale for change
number	proposed stage		
16 VAC25- 145-30.1	"§ 30 Connectors	"§ 30 <u>Connectors</u>	Clarification was added regarding the protection of
	Each connector shall:  1. Be protected in accordance with § 20 of these requirements from fall hazards of 10 feet or more above a lower level; except when structural members are being lifted for connection, when it is considered by the connector to be a greater hazard to utilize fall protection in accordance with § 20, than to have freedom of movement to avoid accidental or inadvertent contact with structural members being hoisted to be placed and connected into position	Each connector shall:  1. Be protected in accordance with § 20 of these requirements from fall hazards of 10 feet or more above a lower level; except when structural members are being lifted placed for connection, when it is considered by the connector to be a greater hazard to utilize fall protection in accordance with § 20, than to have freedom of movement to avoid accidental or inadvertent contact with structural members being hoisted to be placed and connected into position—during placement and initial connection.	"connectors" to cover additional situations where structural members are between multiple lifts, but the ironworkers are not yet tied off.
16 VAC25- 145-40.B	"8 40 Decking  "B. Each employee working with the decking zone and at the leading edge of decking operations shall be protected in accordance with subsection 20 A. of these requirements from fall hazards of 10 feet or more above a lower level."	*B. Each employee working within the boundaries of a leading edge decking operation at the leading edge of decking operations shall be protected in accordance with subsection 20 A. of these requirements from fall hazards of 10 feet or more above a lower level."	Some word changes were needed to clarify the intent and requirements of this provision. The intent of the proposed language is to make clear that the "controlled decking zone" concept contained in federal OSHA's Steel Erection Standard, 29 CFR 1926.760 (c) is not being adopted in Virginia, and that, in its stead, fall protection will be required for all workers engaged in

	decking operations, or any
	other worker within the
	boundaries of a leading
	edge decking operation.

# Public comment

Please summarize all comments received during the public comment period following the publication of the proposed stage, and provide the agency response. If no comment was received, please so indicate.

	Agency response
Safety Director for Riddleberger Bros., Inc., Mt. Crawford, VA  Crawford, VA  additional clarification be added regarding the protection of "connectors" in § 30 of the proposed regulation. He suggested amending the proposed language by including the following language, "and the iron is in the air for connection" He explained that this added language would cover additional situations where structural members are being lifted for connection but have not been tied off yet.	The staff of the Department agrees that some changes in the wording of this subsection would help to clarify the intent and requirements of this provision. This exception to the general fall protection requirements contained in §20 was to prevent "connectors" from being exposed to the potentially greater hazard of being struck by structural steel members during initial placement and connection due to wind gusts, crane operator error or some other unforeseen incident which could cause the steel to swing in an unpredictable manner and strike the connector. In such situations, if the connector is "tied off" his freedom of movement could be so limited as to prevent his ability to avoid the steel that was swinging out of control.  However, as Commenter One noted, during the time between multiple lifts (or for that matter during the time immediately prior to initial placement of the structural steel member), connectors are not exposed to any hazard of swinging steel. The intent of the proposed regulation is to provide fall protection at all times for all steel erection employees, including connectors, at or above the 10 foot height, except in cases where a connector is immediately subject to the potentially greater hazard of being struck by swinging steel during placement of the steel for initial connection.  The staff recommended language changes § 30.1, which were adopted by the Board.

Commenter One next suggested amending the proposed language in §40.B., Decking, by adding the following language: "within the decking zone and...." Commenter One explained that including this suggested language would limit access to others from coming into the decking zone.

In closing, Commenter One anecdotally related that during one of his company's large projects involving steel erection, four employees experienced falls, but because all four were "tied off," each was able to return safely home at the end of the work day.

The staff of the Department agrees that some changes in the wording of this subsection would help to clarify the intent and requirements of this provision. The intent of the proposed language in §40, Decking, is to make clear that the "controlled decking zone" concept contained in federal OSHA's Steel Erection Standard at 29 CFR 1926.760(c) is not being adopted in Virginia, and that in its stead, fall protection will be required for all workers engaged in decking operations, or any other worker within the boundaries of a leading edge decking operation.

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[NOTE: "Leading edge" is defined in the Steel Erection Standard to mean "the unprotected side and edge of a floor, roof, or formwork for a floor or other walking/working surface (such as deck) which changes location as additional floor, roof, decking or formwork sections are placed, formed or constructed." 16 VAC 25-175-1926.751].

The current proposed language in §40.B. only provides protection from falls for employees "working at the leading edge of decking operations." While the Department interprets the words "working at the leading edge" to include all employees who may be present at the "leading edge" whether they are engaged in placement of decking, delivering tools or supplies, observing the decking operation, or are present for any other reason; staff concurs with Commenter One in noting that the proposed language in §40.B. does not address the issue of workers who are not immediately present at the "leading edge," but are still inside the boundaries of the leading edge decking operation, and potentially exposed to fall hazards. Because the very nature of leading edge work is that the "leading edge" is never static - it is always changing and moving; the potential for unintended exposures to fall hazards increases within the boundaries of a leading edge decking operation. In addition, there is the potential for other fall hazards to be present, such as floor holes, that are inside the boundaries of the leading edge decking operation, but not located at the "leading edge." The current language in the proposed regulation adopted by the Board at its December 2, 2002 meeting, would not address exposure to such hazards.

The staff recommended language changes §

Walter Wise (Commenter Two), President of the Ironworkers District Council of Mid-Atlantic States

Commenter Two was not in attendance at the meeting, but he sent his written comments to the Board meeting. Commenter Two stated that the Steel Erection standard resulted from recommendations of the Steel **Erection Negotiated Rulemaking** Advisory Committee (SENRAC) after years of meetings, review of thousands of documents, statistics and comments to arrive at a unanimous consensus for their recommendations that then underwent OSHA's approval process before becoming a regulation. He further said that the State of Virginia had not offered any views or arguments that were not thoroughly considered and rejected by SENRAC or OSHA.

Regarding 16 VAC 25-145-20, General Requirements, Section A, Commenter Two objected to VOSH's adoption of a 10-foot height requirement for the use of fall protection systems instead of the federal requirement of more than 15 feet. He noted that it is very difficult in field applications to arrest a fall in 10 feet. 40.B, which were adopted by the Board.

The Staff of the Department respects the concern and perspective of Commenter Two and is well aware of the education, training, and practical work experience which he and the organization he represents relied on in promoting their position on SENRAC and the federal OSHA standard. However, the staff respectfully disagrees with the position taken by Commenter Two. First, the staff notes that all of the arguments currently raised by Commenter Two were presented previously to the Board at its October 18, 2001 meeting where the issue of fall protection in steel erection initially came before the Board. At that time, the Board decided to proceed with this rulemaking. Second, the VOSH Program has successfully enforced a 10-foot fall rule for steel erection for over 15 years. During that period of enforcement, no fatalities involving a fall of 15 feet or less occurred in the Commonwealth in the steel erection industry. Given this lengthy period of successful enforcement of §§1926.28(a) and 1926.105(a), it is hard for the staff to question either the technological feasibility or benefit/cost of such a policy.

With regard to the issue that it is "difficult in field applications to arrest a fall within 10 feet," Commenter Two attached pages from the preamble to the federal OSHA Steel Erection Standard (66 Fed. Reg. 5203, 5243-5249) in support of his contention. Without restating the lengthy analysis that federal OSHA engaged in on this issue, it can be noted that while some comments in the federal record supported the 15 foot fall requirement eventually adopted in the federal standard and noted the difficulties of providing fall protection in certain circumstances, there were equally persuasive comments which argued for a 6 foot fall requirement in steel erection. OSHA did provide an analysis of the difficulties of arresting a fall using various configurations of body harnesses, lanyards and lifelines (66 Fed. Reg. 5244); however, they also noted that a number of commenters during the federal rulemaking, which included large multi-state construction companies, had successfully implemented 6 foot fall protection programs for all steel erection operations, including

connecting and decking. One commenter indicated that when "the structure cannot accommodate fall protection or prevention systems, their company uses aerial lifts and/or scissors lifts." (Specifically in 66 Fed. Reg. 5244: "Five...companies testified to the successful implementation of their 6-foot programs for steel erection for all steel erection operations, including decking and connecting. For example, a representative of Kellogg, Brown & Root testified...that their company has had a 6-foot policy for eight years. When the structure cannot accommodate fall protection or fall protection systems, their company uses aerial lifts and/or scissors lifts. W.S. Bellows Construction Corp. implemented a 6-foot fall protection policy in 1994....Bellows testified that their policy has increased productivity, decreased insurance costs and saved lives. An official from Centex Construction Co., a general contractor, declared that his company, because of positive experiences on earlier projects, implemented a policy to hire only subcontractors using 6-foot programs.").

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Jay Withrow (Commenter Three), Director of Legal Support, Virginia Department of Labor and Industry As noted earlier in this briefing package, the Board is authorized by Va. Code § 40.1-22(5) "to adopt, alter, amend, or repeal rules and regulations to further, protect and promote the safety and health of employees....In making such rules and regulations to protect the occupational safety and health of employees, the Board shall adopt the standard which most adequately assures, to the extent feasible, on the basis of the best available evidence, that no employee will suffer material impairment of health or functional capacity....In addition to the attainment of the highest degree of health and safety protection for the employee, other considerations shall be the latest available scientific data in the field, the feasibility of the standards, and experience gained under this and other health and safety laws." (Emphasis added.). The federal register documents provided by Commenter Two, while providing support for his position, also clearly provide support for the Department's position that providing fall protection during all steel erection activities at the height of 10 feet is feasible (see also comments provided by Commenter One). In addition to feasibility, the Board is charged to consider "the attainment of the highest degree of health and safety protection for the employee" and "experience gained under this and other health and safety laws." The VOSH

Program has over 15 years experience in successfully enforcing a 10-foot fall requirement in steel erection, and memorializing that policy into regulation is consistent with the statutory mandate of the Board.

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The staff did not recommend any changes to the proposed regulation in response to these comments.

Commenter Two added that there is no statistical evidence regarding ironworker fatalities resulting from falls of 10-15 feet. With regard to Commenter Two's statement that there is no statistical evidence regarding ironworker fatalities resulting from falls of 10-15 feet, he again provided support from the federal rulemaking record (66 Fed. Reg. 5244-5255). However, as those pages indicate, because of recordkeeping methods at the federal level, OSHA does not breakout how many ironworker fatalities occurred between 11 and 15 feet (but OSHA noted that the study they looked at found that 25% of all falls studied during a five year period were from a height of 11-20 feet, with an additional 8% from a height of 6-10 feet).

What can be concluded from those studies as well as the Department's own statistics on fatal construction accidents in Virginia (26 fatal construction accidents of falls of less than 15 feet over the last 11 years), is that falls from heights of 10 feet or above can result in a material impairment of health or functional capacity." (Va. Code § 40.1-22(5), emphasis added.). Again, VOSH has enforced a 10-foot fall protection requirement in steel erection for over 15 years through the enforcement of §§1926.28(a) and 1926.105(a), and considers that policy to be at least partly responsible for the lack of fatal accidents in steel erection from falls of 15 feet or less over the last 11 years. As noted in the briefing package above, although steel erectors may generally be better trained than the average construction worker to work at heights, if they do fall, the hazard and risk of serious injury or death are exactly the same for a steel erector as for any other construction worker.

The staff did not recommend any changes to the proposed regulation in response to these comments.

With respect to 16 VAC 25-145-30, Connectors, Commenter Two stated that the connectors can best determine what is safest and in their best interest. The flexibility given As noted above, the staff is well aware of and has a great deal of respect for the opinion and practical work experience of Commenter Two and the organization he represents. It was with the knowledge of the significant experience and skill with which connectors generally

connectors in respect to fall protection should include the entire connecting operation. In support of this position, Commenter Two attached pages from the preamble to the federal OSHA Steel Erection Standard (66 Fed. Reg. 5203, 5245-5247).

approach their job, that the longstanding VOSH administrative policy and the proposed regulation were drafted to contain the provision that allows connectors to make their own decision about fall protection and whether a "greater hazard" could exist while structural steel was being placed and initially connected.

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Without restating the analysis that federal OSHA engaged in on this issue, it is noted that OSHA in the end deferred to the SENRAC position, which it described as a "compromise position" (i.e. not unanimous) (66 Fed. Reg. 5246). As noted with the other fall protection issues above, it is clear from the federal rulemaking record and the comments received from Commenter One discussed above, that providing fall protection for connectors is feasible. It is also clear that a fall by a connector from a height of 10 to 15 feet could result in a material impairment of health or functional capacity." (Va. Code § 40.1-22(5), emphasis added.). Although steel erectors may generally be better trained than the average construction worker to work at heights, if they do fall, the hazard and risk of serious injury or death are exactly the same for a steel erector as for any other construction worker. Because of the VOSH Program's long experience in successfully and safely enforcing a 10-foot fall requirement in steel erection, the staff feels that memorializing that policy into regulation is consistent with the statutory mandate of the Board.

The staff did not recommend any changes to the proposed regulation in response to these comments.

Regarding 16 VAC 25-145-40, Decking, Commenter Two stated arresting a fall from 10 feet, especially during a decking operation is very difficult. He contends that increased training and restriction of individuals to the work area will dramatically decrease accidents in the decking operation, whereas, mandatory fall protection for these few specialized ironworkers may increase risks.

Refer to the discussion above concerning the difficulties of arresting a fall from 10 feet during a connecting operation and the Staff's response. It should again be noted that the federal rulemaking record contained comments from a number of large multi-state construction companies that had successfully implemented 6 foot fall protection programs for all steel erection operations, including connecting and decking.

The Federal Register documents provided by Commenter Two, while providing support for his position, also clearly provide support (along with the comments of Commenter One

discussed above) for the Department's position that providing fall protection during all steel erection decking activities at the height of 10 feet is feasible, and is currently practiced by construction firms in Virginia. Finally, while we agree with Commenter Two that the increased level of training required under the standard is a great improvement over the old steel erection standard, the staff respectfully disagrees with the contention that training of decking workers and limiting access to the decking area (which are required as well under the final VOSH standard), would provide equivalent protection to an engineering control (e.g. a net, guard rails, etc.) or a personal fall arrest system when an employee actually does fall, for whatever reason. Although steel erectors may generally be better trained than the average construction worker to work at heights, if they do fall, the hazard and risk of serious injury or death are exactly as severe for a steel erector as for any other construction worker.

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The staff did not recommend any changes to the proposed regulation in response to these comments

Commenter Three was a Virginia Department of Labor and Industry Staff member. He distributed two reports to the Board. The first concerned VOSH inspections in Steel Erection (Standard Industrial Classification (SIC) 1791) for the Period of January 1, 1983 through August 5, 2003. This report included VOSH inspections in Steel Erection (SIC 1791) where §§ 1926.28(a) and 1926.105(a) were cited.

The staff notes from the report that VOSH conducted 987 inspections in the Steel Erection industry during the period January 1, 1983 through August 5, 2003. Approximately 53% of the inspections involved the issuance of serious, repeat or willful violations of VOSH Construction Standards. Approximately 33% of the inspections were found to have no violations of VOSH Standards. Thirty-three of the inspections concerned fatal or catastrophic accidents (a catastrophe is defined as three or more employees being admitted to the hospital).

VOSH issued citations for §§1926.28(a) and 1926.105(a) in 206 inspections in the Steel Erection Industry during the period January 1, 1983 through August 5, 2003 (206 inspections with violations of §§1926.28(a) and 1926.105(a) represents 20% of the total number of inspections (987) for the period).

Violations of §1926.28(a): 179

Violations of §1926.105(a): 28

Year \$1926.28(a) \$1926.105(a)

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1983	3	0
1984	6	0
1985	6	0
1986	10	0
1987	11	0
1988	13	5
1989	5	2
1990	11	0
1991	8	0
1992	5	1
1993	5	1
1994	9	0
1995	1	0
1996	5	2
1997	9	2
1998	14	3
1999	15	3
2000	10	4
2001	12	2
2002	14	2
2003	7	1

Totals	179	28
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The second handout concerned VOSH Fatality Inspections for Steel Erection, SIC 1791 for the Period of January 1, 1983 through August 5, 2003. This report contained a narrative description of the accident for most inspections and listed any violations and penalties that were cited by VOSH. In this report, a dot was placed beside the cases involving fatal accident inspections concerning decking operations and connectors in which citations were issued involving §§1926.28(a) and 1926.105(a).

The staff notes that of the 25 fatal steel erection accident inspections conducted where fall protection appears to have been the primary cause of the accident, 6 (24%) concerned decking operations and 2 (8%) concerned connecting operations. There was 1 (4%) other inspection which involved fall protection concerning a fall while moving skylight roof panels on a structural steel building.

For the 25 fatal accident inspections,§1926.28(a) was cited 3 times and §1926.105(a) was cited 3 times.

The staff did not recommend any additional changes in response to the comments of Commenter Three.

## All changes made in this regulatory action

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Please detail all changes that are being proposed and the consequences of the proposed changes. Detail new provisions and/or all changes to existing sections.

Current	Proposed	Current requirement	Proposed change and rationale
section number	new section number, if applicable		
16 VAC 25-145-30		"§ 30 <u>Connectors</u>	"§ 30 Connectors
		Each connector shall:	Each connector shall:
		1. Be protected in accordance with § 20 of these requirements from fall hazards of 10 feet or more above a lower level; except when structural members are being lifted for connection, when it is considered by the connector to be a greater hazard to utilize fall protection in accordance with § 20, than to have freedom of movement to avoid accidental or inadvertent contact with structural members being hoisted to be placed and connected into position	1. Be protected in accordance with § 20 of these requirements from fall hazards of 10 feet or more above a lower level; except when structural members are being lifted placed for connection, when it is considered by the connector to be a greater hazard to utilize fall protection in accordance with § 20, than to have freedom of movement to avoid accidental or inadvertent contact with structural members being hoisted to be placed and connected into position—during placement and initial connection.  Rationale: Clarification was added regarding the protection of "connectors" to cover additional situations where structural members are between multiple lifts, but the ironworkers are not yet tied off.
16 VAC 25-145-40		"8 40 Decking  "B. Each employee working with the decking zone and at the leading edge of decking operations shall be protected in accordance with subsection 20 A. of these requirements from fall hazards of 10 feet or more above a lower level."	B. Each employee working within the boundaries of a leading edge decking operation at the leading edge of decking operations shall be protected in accordance with subsection 20 A. of these requirements from fall hazards of 10 feet or more above a lower level."  Rationale: Some word changes were needed to clarify the intent and requirements of this provision. The intent of the proposed language is to make clear that the "controlled decking zone" concept contained in federal OSHA's Steel Erection Standard, 29 CFR 1926.760 (c) is not being adopted in Virginia, and that, in its stead, fall protection will be required for all workers engaged in decking operations, or any other

	decking operation.

Enter any other statement here

# Impact on family

Please assess the impact of the proposed regulatory action on the institution of the family and family stability.

This regulatory action has no impact on the institution of the family or family stability.

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