



# OSHA REGIONAL NOTICE

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

<b>DIRECTIVE NUMBER:</b> CPL-04-00-020G	<b>EFFECTIVE DATE:</b> October 1, 2016
<b>SUBJECT:</b> Local Emphasis Program – Mast Climbing Work Platforms	
<b>REGIONAL IDENTIFIER:</b> Region I	

## ABSTRACT

**Purpose:** This directive renews a local emphasis program (LEP) CPL-04-00-020 for the purpose of scheduling and conducting inspections in the construction industry. Its purpose is to address the hazards associated with erecting, using and operating, and dismantling a mast climbing work platform and to ensure owners and/or employers establish adequate programs for conducting thorough inspections of the mast climbing units in accordance with applicable regulations and manufacturer specifications. The employer target groups would primarily include, but not be limited to, North American Industry Classification System (NAICS) codes #238140 Masonry; #238310 Plastering, Drywall, and Insulation; #238130 Carpentry/Framing; #238170 Siding Contractors; #238140 Masonry Concrete Work #238120 Ironworking; #238150 Glass and Glazing; (Specialty Contractors) #238320 Painting Contractors; #238910 Demolition; and #238990 All Other Specialty Trade Contractors; and NAICS #236220, and #236210 Building Construction, General Contractors, and Construction Managers working on construction sites.

**Scope:** This notice applies to the Braintree Area Office, Andover Area Office and the Springfield Area Office’s jurisdictions.

**References:** OSHA Instructions:

- A. CPL 04-00-001, November 10, 1999; Procedures for Approval of Local Emphasis Programs (LEPs).
- B. CPL 02-00-1160, August 2, 2016; Field Operations Manual (FOM).
- C. OSHA Instruction CPL 02-00-51 Enforcement Exemptions and Limitations under the Appropriations Act, May 28, 1998; revised Appendix-A effective January 29, 2016.
- D. OSHA’s Strategic Management Plan.
- E. OSHA Guidance to Compliance Officers for Focused Inspections, August 20, 1995.
- F. U.S. Department of Labor Strategic Plan – 2014-2018.

**Cancellations:** None.

**State Impact:** The Massachusetts 21(d) Consultation Program will be informed of the LEP extension and will be invited to participate in outreach activities.

**Action Offices:** Braintree Area Office, Andover Area Office and Springfield Area Office.

**Originating Office:** Braintree Area Office and Andover Area Office

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By and Under the Authority of

Jeffery A Erskine  
Acting Regional Administrator

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### **Executive Summary**

This notice is a renewal of the OSHA Regional Instruction CPL-04-00-020, October 1, 2012, Local Emphasis Program (LEP) for the purpose of for conducting inspections of mast climbing work platforms within the jurisdiction of the Braintree, Springfield and Andover Area Offices. The intent of this local emphasis program is to identify potential problems in the operation and maintenance of mast climbing work platforms; to provide outreach to employers who are frequently unfamiliar with OSHA standards and manufacturer specifications; and to target, schedule and inspect mast climbing work platforms on applicable construction sites which are usually only inspected as a result of unprogrammed activity. Due to the continue significant increase in Region 1 construction projects that utilize mast climbing work platforms during construction activities, Region 1 will extend this LEP through September 30, 2017.

### **Significant Changes**

None

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**I. Purpose:** This directive renews a local emphasis program (LEP) CPL-04-00-020F for the purpose of scheduling and conducting inspections in the construction industry. Its purpose is to address the hazards associated with erecting, using and operating, and dismantling a mast climbing work platform, and ensure owners and/or employers establish adequate programs for conducting thorough inspections of the mast climbing units in accordance with applicable regulations and manufacturer specifications. The employer target groups would primarily include, but not be limited to, North American Industry Classification System (NAICS) codes #238140 Masonry; #238310 Plastering, Drywall, and Insulation; #238130 Carpentry/Framing; #238170 Siding Contractors; #238140 Masonry Concrete Work #238120 Ironworking; #238150 Glass and Glazing; (Specialty Contractors) #238320 Painting Contractors; #238910 Demolition; and #238990 All Other Specialty Trade Contractors; and NAICS #236220, and #236210 Building Construction, General Contractors, and Construction Managers working on construction sites. This program will address one of the agency's goals of reducing occupational injuries and fatalities by three percent annually through direct intervention. Instead of relying on complaints and referrals, which are often received after an accident has occurred; the area offices will be able to take a proactive approach to safety through communication with construction stakeholders prior to the occurrence of an incident.

Although Region I has a Fall LEP, that LEP relies upon CSHO referrals for targeting purposes and on CSHO observations of fall hazards apparent from the outside of the building structures. This Fall LEP does not adequately address other hazards associated with the use of mast climbing work platforms in construction that would not be readily observable by CSHOs driving by the buildings. These mast climbing hazards include, but are not limited to: emergency egress; qualifications, competency, and training of erectors, users, and operators; inadequate structural integrity and capacity of the mast climbing platforms; mast climbing work platforms failing or collapsing; hazards associated with falls not otherwise observable from the street (i.e. floor openings); overhead struck by hazards; overhead power lines; amputation hazards from moving platform parts; and struck-by and other hazards from construction vehicles and equipment used to move and stabilize mast towers. This Mast Climbing Construction LEP will therefore complement the current Fall LEP in that it would allow the Braintree, Andover and Springfield OSHA Area offices to address construction hazards not targeted by the Fall LEP and other Regional and National LEPs and NEPs.

This local emphasis program consists primarily of two elements. The first element is an enforcement targeting initiative that will allow the Braintree, Andover and Springfield Area Offices to focus inspection resources on a hazard rarely targeted by programmed construction inspection programs (e.g. construction targeting reports).

The second element of this program is compliance assistance and outreach which will be performed by the Braintree, Andover and Springfield Area Offices to raise employer and employee awareness regarding the hazards associated with mast climbing work platforms and the applicable OSHA and manufacturer safety regulations and requirements.

**II. Scope:** This notice applies within the jurisdiction of the Braintree, Andover and Springfield Area Offices.

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### **III. References:**

- A. OSHA Instruction CPL 04-00-001, November 10, 1999; Procedures for Approval of Local Emphasis Programs (LEPs).
- B. CPL 02-00-160, August 2, 2016; Field Operations Manual (FOM)
- C. OSHA Instruction CPL 02-00-51 Enforcement Exemptions and Limitations under the Appropriations Act, May 28, 1998; revised Appendix-A effective January 29, 2016.
- D. OSHA's FY16 Operating Plan.
- E. OSHA Guidance to Compliance Officers for Focused Inspections, Revision 1, issued September 20, 1995.

**IV. Effective Date:** This renewal will go into effect on October 1, 2016.

**V. Expiration:** Unless extended by the Regional Administrator, this local emphasis program will expire on September 30, 2017.

### **VI. Definitions:**

- A. A "Focused Inspection" is defined by OSHA as a partial inspection based on the evaluation of the controlling employer's safety and health program, and evaluation of the four groups of hazards which are the predominant causes of construction fatalities and serious injuries, i.e. struck-by, fall hazards, electrical, and caught in/between. The Focused Inspection program is not a targeting program and is not an inspection exemption program.
- B. A mast climbing work platform is a mechanical crank-up or motorized powered elevating work platform or platforms supported by one or more vertical masts for the purpose of positioning personnel, along with necessary tools, equipment, and materials to perform their work.
- C. **Background and Program Description:** As part of The Department of Labor's FY 2014-2018 Strategic Plan and OSHA's FY 2016 Operating Plan is to ensure workplaces are safe and healthy. The Agency has established various mission-related goals. One of these goals is to reduce occupational hazards through direct intervention. Within the Braintree, Andover and Springfield Area Offices' jurisdiction, there has been recent and projected growth in the use of mast climbing work platforms on construction work sites in the greater metropolitan Boston, Cambridge and Worcester, Massachusetts areas. On average, over 16,800 people now work on some 5,600 mast climbers each day. Workers spend an additional 3.3 million work hours erecting and dismantling mast climbers each year. These platforms are frequently erected in tight urban areas and other areas where space is limited and where multiple trades are working. When used properly, mast climbing work platforms have proven to be unmatched in their combined advantages of higher lifting capacity, productivity, comfort, and safety. They are particularly useful on long-span walls because they allow workers to move easily along the entire width of the wall as well as vertically up and down it while having their materials readily at hand. In addition to employee exposure, there is potential public exposure to mast climbing hazards. It has been noted during a number of OSHA

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inspections that safety training on the proper erection, use, and dismantling of these work platforms is frequently lacking. The employers frequently are not following the manufacturers' instructions. It has become apparent that to prevent future failure of these platforms, along with the accompanying accidents and/or fatalities, an effective safety outreach and enforcement program is paramount.

The Braintree, Andover and Springfield OSHA area offices are initiating this LEP to address the hazards associated with mast climbing work platform operations, and to ensure that owners and/or employers responsible for operating a mast climbing work platform establish adequate programs for conducting thorough inspections of mast climbing units, and properly train their employees to erect, use, dismantle, and maintain those units in accordance with applicable regulations and manufacturer specifications. A number of recent accidents and fatalities have occurred involving these mast climbing units:

On November 12, 2009, an OSHA accident investigation took place at Faneuil Hall in Boston, Massachusetts, where a mast climbing work platform collapsed while being dismantled adjacent to a major public tourist attraction. Two employees were injured as a result of the overloading of the scaffold and properly load the platform while the work platform bracing was removed, and the, which combined to cause the eventual tip over of the mast climbing unit.

On July 3, 2006, an OSHA accident investigation took place in Boston, Massachusetts, where a mast climbing work platform collapsed approximately ten stories (approximately 100 feet) above a major public roadway. Luckily, employees working on the scaffold were able to escape through unfinished window openings, and no injuries occurred. The accident occurred when the employer did not repair or replace a missing/broken hook spring with the proper spring replacement part for the mast climbing work platform. Also, the employer failed to properly inspect the mast climbing work platform to ensure that the unit was equipped with gravity safety dogs after the platform was installed for use on the mast climbing platform.

On April 3, 2006, a double fatality occurred at the Emerson College Piano Row jobsite in Boston, Massachusetts, as a result of the employer's failure to support the mast climbing work platform when bracing was removed, and the overloading of the scaffold, which caused the eventual tip over of the mast climbing unit. A passing motorist was also killed, and two pedestrians were injured.

On July 18, 2006, an OSHA programmed related inspection was conducted in Medford, Massachusetts. The inspection revealed that employees were not trained in the procedures to minimize the hazards of erecting mast climbing scaffolding to the engineered specifications. The CSHO observed problems with tie-in braces, anchorage points (and bolts used), and installation of braces at a greater angle than specified by the engineer.

Hazards unique to mast climbing work platforms to be addressed by this LEP that are not currently addressed by the Region 1 Fall LEP or other regional or area office LEPs include the following:

**Platform collapse:** Mast climbing platform collapses result, in many cases, from the failure to follow the manufacturer's erection, dismantling, use, and bracing procedures. Other

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contributing factors to mast climbing platform collapse are the overloading of the platforms, eccentric loading, other contributing factors such as wind loads, use of overhead canopies, and weather enclosures contributing to a sail effect; failure to construct and load the mast climbing platform in accordance with the manufacturer's specifications for the maximum load allowed on the platform during dismantling, and removal of the braces before securing the platform with the use of proper equipment. It is the employer's responsibility to ensure that a mast climbing work platform which is supported on a cantilevered beam is capable of supporting its own weight and at least four times the maximum load applied to it after the final brace is removed during the dismantling process. Removing the final anchor brace, rendering the mast climbing tower incapable of supporting the loads placed over the cantilevered platform, has been a documented causal factor in accidents. Mast climbing platform collapses often result in serious injury or death.

**Emergency Egress from Disabled Platforms:** It is incumbent upon the employers who use mast climbing work platforms to ensure that emergency escape from a disabled unit meets the requirements of the ANSI/SIA A92.9-2011 Mast-Climbing Work Platforms in that machines need to be equipped with auxiliary descent means. These mechanisms are required in the event of a machine failure so that workers can get off the platform safely. If a unit fails, and there is no auxiliary descent means for emergency egress, the employees would have to scale down the mast towers, possibly hundreds of feet, exposing the workers to fall hazards and other potential hazards.

**Bracing Anchorage Points:** Construction techniques and methods present more potential problems to systems such as mast climbing work platforms that attach to the building itself for support. As examples, solid concrete floors are no longer poured over decking. Lightweight materials are used as filler under a thin layer of concrete. If concrete anchor bolts are used in this case, the bolts would unknowingly be drilled into the soft material below and would not be capable of providing the strength required by the manufacturer of the platform to support the mast. Likewise, if an installer attaches anchors to a building's brick veneer, this veneer is more or less a free-standing entity attached to the building at a few strategic spots to maintain the veneer wall itself, not to support the stresses imposed by the platform mast. These are just two examples of possible problem areas for anchors.

**Floor Openings:** Unseen floor openings in the platform are common. The failure of the contractor to adequately cover and/or plank openings may result in serious injury and death.

**Amputations:** Failure of the competent person to inspect the scaffold for visible defects, which include amputation hazards from moving parts, may constitute a source of injury for employees working on the mast climbing work platform.

**Electrical hazards:** Equipment such as extended boom fork lifts or cranes are often used to move and/or relocate mast climbing tower sections. Failure to ensure that equipment working or being moved in the vicinity of power lines or energized transmitters does not come within 10 feet of the power lines may expose employees to the hazards of electrocution.

**Struck-by hazards by equipment and materials:** Employees may become exposed to struck-by hazards associated with moving equipment and machinery, including cranes, extended boom fork lifts, or other equipment. In addition, failure to provide falling object

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protection to prevent workers from being exposed to overhead hazards may result in injury.

**Other Scaffold Hazards:** Other major scaffold hazards associated with mast climbing work platforms include inadequate competent person training and user training in the recognition of unsafe conditions associated with the use of mast climbing work platforms and in the manufacturers' specifications; and inadequate training in fall protection, safe access, and proper erection and dismantling procedures for the mast climbing work platform, as required by manufacturers' specifications. Failure to conduct daily safety inspections of the mast climbing equipment prior to use and at other times during the work day as needed also may result in serious injuries and/or death. Common hazards that must be addressed during safety inspections would include, but not be limited to, ensuring that bracing towers are plumb, anchors are properly bolted, load charts are posted on the platform, pinch points and footing hazards are eliminated, and safety dogs are in working condition for use in the event of an emergency descent.

**VIII. Action:** The Area Directors will ensure that compliance staff involved with this LEP enforcement and outreach initiatives are familiar with the contents of this notice and that the inspection guidelines and procedures are followed. This LEP will expire September 30, 2017, but may be renewed at the discretion of the area directors with the approval of the Regional Administrator.

The Area Directors will ensure outreach through the utilization of the Compliance Assistance Specialists (CAS), is continued to stakeholders at industry and trade association meetings, safety and health contractor area meetings, professional organization meetings and other appropriate forums.

**IX. Procedures:** The selection of sites for inspection and the conduct of inspections shall adhere to the following:

- A. The Area Directors of the Braintree, Andover and Springfield Area Offices will identify Compliance Officers designated to conduct activities and inspections under this LEP. Only CSHOs who have received training on conducting mast climbing work platform inspections will conduct inspections under this program. This training may consist of in-house training as well as training from qualified outside sources. This training will be completed before the enforcement phase of the LEP commences.
- B. Throughout the duration of this program, when designated CSHOs, during the course of their routine travel, observe mast climbing work platforms at construction jobsites, either in use or posing a hazard to employees working in the area, these jobsites will be identified and scheduled for an inspection.
- C. Once a construction site with a mast climbing work platform is identified through a sighting during routine travel, the CSHO will contact the Area Director or Assistant Area Directors to determine the inspection history of the site. A mast climbing work platform owner and/ or employer responsible for operating a mast climbing work platform that has already been inspected under this LEP will not be selected for re-inspection at the same site under the LEP for six months following the last day of the previous inspection. An

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exception will be made if serious hazards are observed by the CSHO at the site and the Area Director or Assistant Area Director gives approval for the re-inspections.

- D. In addition, during all programmed and unprogrammed construction inspections, if a mast climbing work platform is found in to be in use or available for use on the jobsite, the inspection will include an inspection of the mast climbing work platform consistent with the guidelines of this LEP. Again, these mast climbing work platform inspections will be performed only by the personnel designated under this program. In some cases, a CSHO referral may be appropriate under the guidelines of the current FOM to ensure that mast climbing work platforms are inspected by a designated Compliance Officer.
- E. This LEP will not affect the selection of inspections under existing OSHA programmed and unprogrammed activities. Unprogrammed inspections, including imminent danger, fatality/catastrophe, and formal complaints involving construction sites will be scheduled in accordance with current OSHA policy. Inspections initiated as a result of complaints, referrals or accidents may be limited to the area in question or, if a limited scope inspection identifies additional hazards, the inspection may be expanded to address the additional areas of concern. Accidents, complaints and referrals shall be investigated on the work shift during which the alleged hazard exists, where possible.

**X. Determining the Scope of the Inspection:** The scope of the inspection shall be focused. The CSHO shall determine whether or not there is project coordination by the general contractor, prime contractor, builder, or other such entity, and conduct a brief review of the project's safety and health program/plan to determine whether or not the project qualifies for a Focused Inspection.

- A. In order to qualify for a Focused Inspection, the following conditions must be met:
  - i. The project safety and health program/plan meets the requirements of 29 CFR 1926 Subpart C, General Safety and Health Provisions, and
  - ii. There is a designated competent person responsible for and capable of implementing the program/plan.
- B. If the project meets the above criteria, an abbreviated walk-around inspection shall be conducted focusing on:
  - i. Verification of the safety and health program/plan effectiveness by interviews and observation, with particular emphasis on a review of mast climbing work platform inspection records, a physical inspection of the mast climbing work platforms, employee interviews, review of employee training records with regards to erection, use, dismantling, and maintenance of the mast climbing work platforms, and inspection of the operation of the mast climbing work platform. The CSHO will give particular attention to the thoroughness of mast climbing work platform inspections; whether these inspections are conducted in accordance with applicable regulations, manufacturer specifications, and engineering plans; and the specific inspection protocol for identifying and repairing critical defects.
  - ii. The four leading causes of construction fatalities, namely:
    - 1. struck-by ( e.g., falling objects, vehicles, equipment)

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2. caught in/between (e.g., unguarded machinery, equipment, pinch points, moving platform parts)
  3. electrical (e.g. overhead power lines)
  4. fall hazards (mast climbing work platform collapses; lack of guardrails/fall protective equipment; floor openings)
- iii. Other serious hazards observed by the CSHO.

C. The CSHO shall make the determination as to whether a project's safety and health program/plan is effective, but if conditions observed on the project indicate otherwise, the CSHO shall immediately terminate the Focused Inspection and conduct a comprehensive inspection.

**XI. Safety and Health Considerations for CSHOs.** Inspections under this LEP are to be conducted by CSHOs who have received the necessary training on the hazards most likely to be encountered regarding mast climbing work platforms in the construction industry. Personal protective equipment to be worn by CSHOs during on-site inspections shall include, as minimum, safety glasses, hard hats, safety shoes or boots with protective toe impact protection, and fall protective equipment, where applicable and approved use by their supervisor.

**XII. OIS Coding.** Programmed inspections under this LEP will be coded "MAST" in the Local Emphasis Program dropdown menu and fields of the OIS.

Any unprogrammed inspection or other programmed inspection where mast climbing work platforms are inspected as a portion of the inspection will also be coded "MAST" in the Local Emphasis Program dropdown field of the OIS in order to track the full extent of mast climbing work platform inspection activity. In addition, employee complaints, and referrals from police departments and fire departments are to be recorded as unprogrammed inspections.

**XIII. Outreach.** The Braintree, Andover and Springfield Area Offices will continue to carry out various outreach activities to promote comprehensive employer safety and health programs regarding mast climbing work platforms throughout the construction industry. During the outreach sessions, employers will also be encouraged to utilize the Massachusetts 21(d) Consultation Program.

The Braintree, Andover and Springfield Area Offices will approach industry, trade, and other appropriate construction associations, unions, and other sources, as needed, to assist with outreach activities. The area offices will also use local inspection history data to identify construction employers with a history of OSHA violations relating to mast climbing work platform erection, dismantling, operation, and usage, and invite these contractors to local OSHA outreach sessions.

**XIV. Measurement.**

Effectiveness of the Local Emphasis Program targeting system will be determined by the following:

- A. Number of establishments and/or operations visited under the program.

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- B. Number of comprehensive safety and health programs implemented, with special emphasis on programs related to mast climbing work platforms.
- C. Number of inspections where citations were issued.
- D. The number of citations issued for the following hazards: employee hazards associated with emergency egress; qualifications, competency, and training of erectors, users, and operators; inadequate structural integrity and capacity of the mast climbing platforms; mast climbing work platforms failing or collapsing; inadequately maintained mast climbing work platforms which do not meet the manufacturers' specifications; hazards associated with fall hazards not otherwise observable from the street (i.e. floor openings); overhead struck by hazards; overhead power lines; amputation hazards from moving platform parts; struck-by and other hazards from construction vehicles and equipment used to move and stabilize mast towers.
- E. Number of inspections where no citations were issued.
- F. Number of interventions conducted.
- G. Number of hazards corrected.
- H. Number of employees affected/removed from hazards.
- I. Number of employees who receive training on erection, dismantling, operation, and usage of mast climbing work platforms.
- J. Number of outreach sessions conducted.

In addition, the report must respond to the program evaluation items outlined in Appendix A of CPL 04-00-001, Procedures for Approval of Local Emphasis Programs.

**XV. Tracking.** A local area office database will be developed and used to track the progress of this. Information collected will include inspection number, site name, site (street and building) address, and other site information to determine whether or not the specific jobsite and/or employer received a mast climbing work platform LEP inspection within the previous six months. This database will be shared between the Braintree, Andover and Springfield area offices and the Regional Office to prevent duplication of enforcement activities.

**XVI. Program Evaluation.** Annual evaluations of the program will be submitted by the Area Director. This evaluation will be forwarded to the EPTS Assistant Regional Administrator no later than November 15 for each fiscal year the program is in effect.

The Regional Office will compile an evaluation of the program, which will include assessment data listed in Section XIV. Area Directors will provide the following to Region Office to supplement the annual evaluations:

- The number of interventions conducted
- Number of hazards corrected.
- Number of employees affected/removed from hazards.
- Number of employees who receive training on erection, dismantling, operation, and usage of mast climbing work platforms.